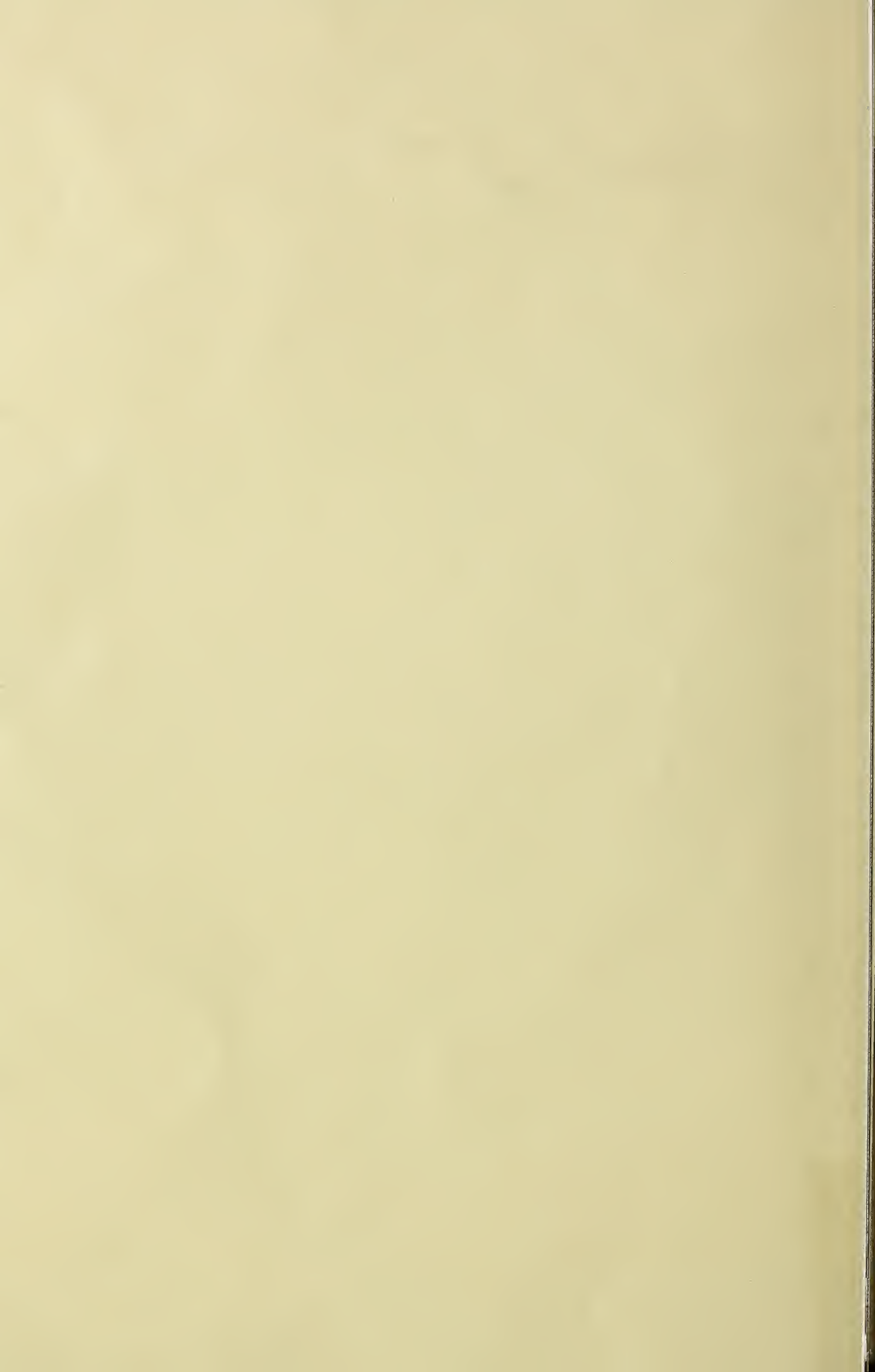


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THE AGRICULTURAL STUDENT

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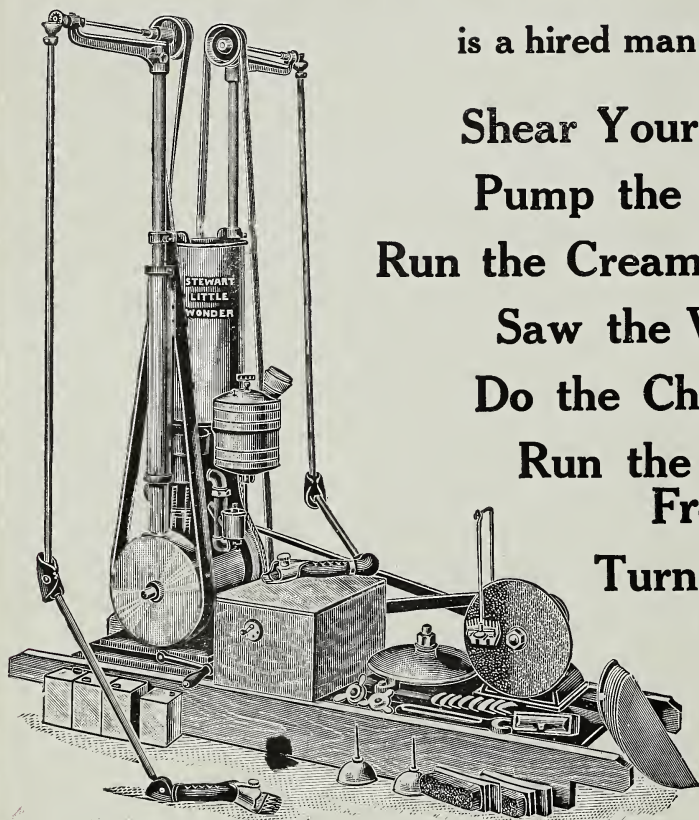


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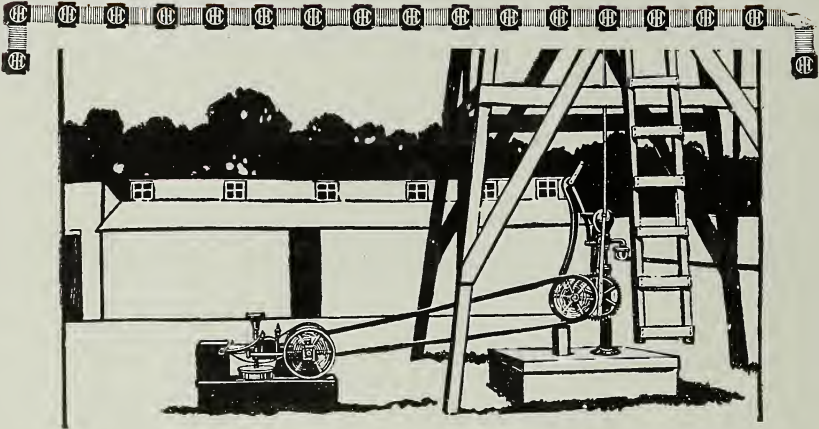
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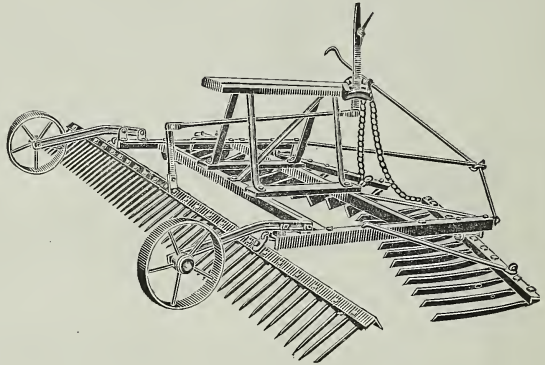
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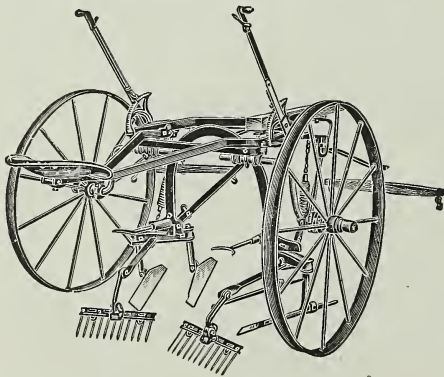
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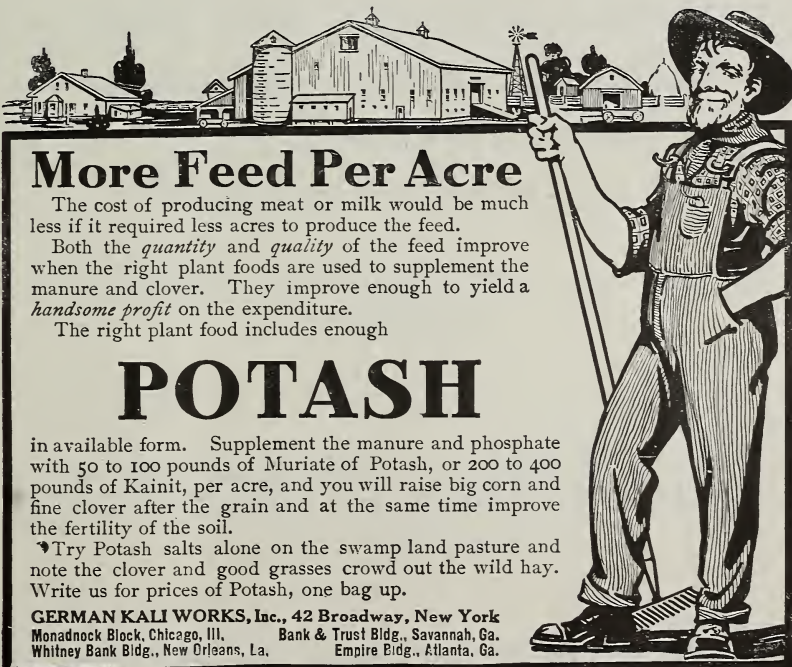
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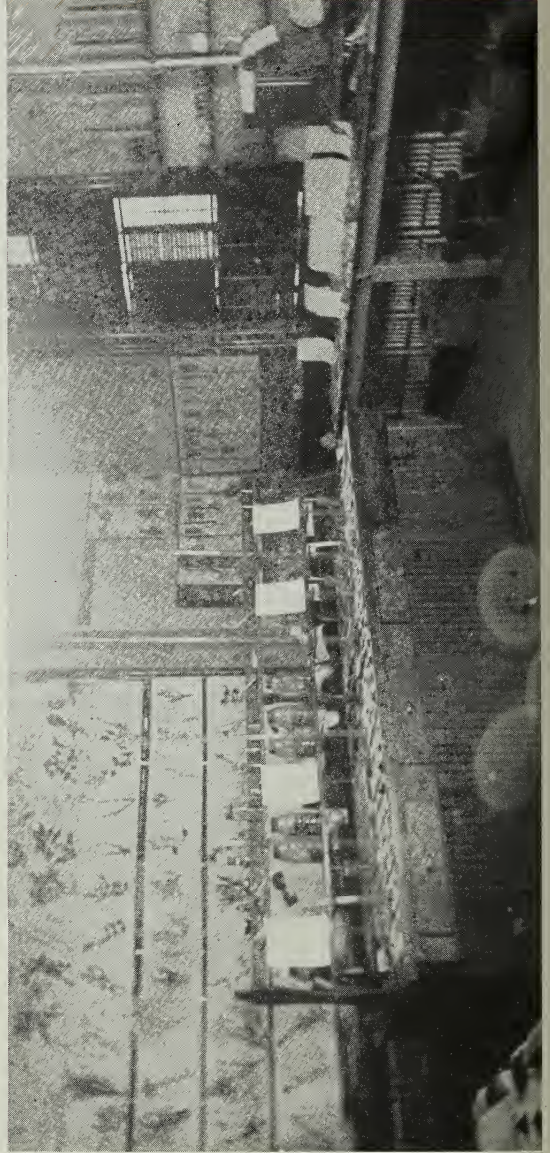
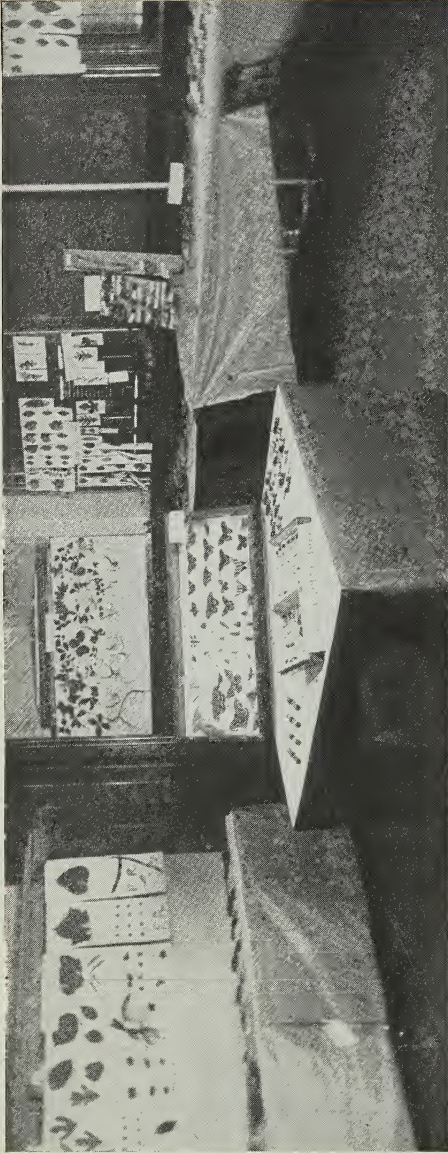
The Ohio Dairy Co.

COLUMBUS, OHIO



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THE AGRICULTURAL STUDENT

Vol. XX.

OHIO STATE UNIVERSITY, COLUMBUS, OCTOBER, 1913

No. 2

The County Agricultural Adviser

E. T. ROBBINS

Agricultural Adviser, Tazewell County, Illinois

THE latest figure in modern farming is the county agricultural adviser. The new plan of bringing expert advice directly to the farm was first applied by the United States Department of Agriculture in the South. There the benefits were immediate and marked. Now the idea has been adopted in the North. With generally more prosperous farmers and the more difficult problems of mixed farming, the North has chosen men with the best of training to carry on this work. Scattered counties in several of the northern states have already taken this progressive step. There are about a dozen counties now in Illinois where in each case a capable man gives his entire attention to the needs and problems of the local farmers.

The plan has been a signal success from the very start. For years farmers have been reading experiment station bulletins and circulars, as well as the weekly agricultural papers and such high-class magazines as "The Agricultural Student." They have been attending farmers' institutes, short courses and long courses. The result is that they are fairly well informed regarding the general scheme for soil and crop improvement and the better management of live stock, but they crave specific personal advice regarding the inauguration of new plans in their farm work. Each farm has its own special problems, each field its

peculiarities. When a man can look his farm over and discuss its condition and its future with someone who can understand its needs, he feels that he is getting a new and promising insight into his problem. It is the man-to-man discussion that he has been needing.

County organization for the support of this work has been necessary. Usually a county association has been formed with sometimes subsidiary township organizations. These have solicited new members and subscriptions. The funds raised in this way have been supplemented in a limited number of counties by an annual allowance from the United States Department of Agriculture. The work has also been liberally aided by Sears, Roebuck & Co., who have donated \$1,000 per county to the first 100 counties to organize and apply for such aid. The plan of local subscriptions has varied. In some counties only large contributions have been sought and the county man has been expected to confine his attention entirely to subscribers. In others subscriptions have ranged from \$1.00 up, according to the liberality of the farmers, bankers and business men who have become interested. In such a case a long list of contributors has been necessary and, while the adviser cuts his farm visits shorter, he goes wherever his attention seems most needed. The local subscriptions have been increased in some counties by ap-

appropriations of perhaps \$1,000 by the board of supervisors, with the provision that the county poor farm be placed under his supervision for demonstration purposes. Some counties have started work with funds only provided for one year. Others have had finances arranged for three years or more. The latter plan is much better, for the work should be placed on the most permanent basis possible. There is necessarily some office and operating equipment, including an automobile, to be secured, and these things are good for a term of years. Only a small proportion of the county's farmers can be given personal visits and advice in any one year, and even then the improved practices resulting call for return trips. For instance, a man decides to build a silo; later on he will desire advice about filling it, and still later he faces perplexities about feeding it to get the best results. He has been started right, and he must be cared for as he makes these improvements and uses them.

In the North the county adviser has an office in the city where he resides; perhaps at the county seat, at least in a city which is easy of access. The work soon develops considerable correspondence, and he needs a stenographer to expedite this part of the work and take care of the office routine, such as filing applications and arranging schedules for farm visits. The office should be open every day so that telephone calls may be answered and visitors can make their wants known or consult the books, bulletins and periodical literature kept on file. The county adviser is usually away at his work each day, and then the stenographer has charge of the office.

The adviser's special work is farm visits, as he probably is most useful

through these. Applications for these are listed and attended to in the order in which they are received, excepting in emergencies. A man can make from two to six or eight visits a day, depending on the character of the work. It requires some hours of hard work to make borings in several parts of each field on a large farm to form the basis for a complete scheme of soil improvement. It takes but a few minutes to examine an alfalfa field that is suffering for inoculation, or to identify Canadian thistles and explain how surely to eradicate them by keeping them absolutely cut down out of sight for an entire season. Systematic records of work are necessary as a basis for future advice, much of it by correspondence. About five days a week on the road and one day in the office seems to be the usual division of an adviser's time during the crop season. An automobile is a necessity for rapid farm visits, so that a man may spend the day among farmers in the farthest corner of the county and still get home at night to look over his mail, answer telephone calls and keep all lines of his work well in hand—and have a little time for himself and his family.

There are various local organizations in the county that demand attention; there are farmers' meetings where the adviser must take a leading part in the discussions; there are public school courses with which he must assist; there are institutes and short courses where he is necessarily a leader; there is the county fair, where his work must be explained, and there are the county newspapers which desire frequent information regarding the progress and results of the movement.

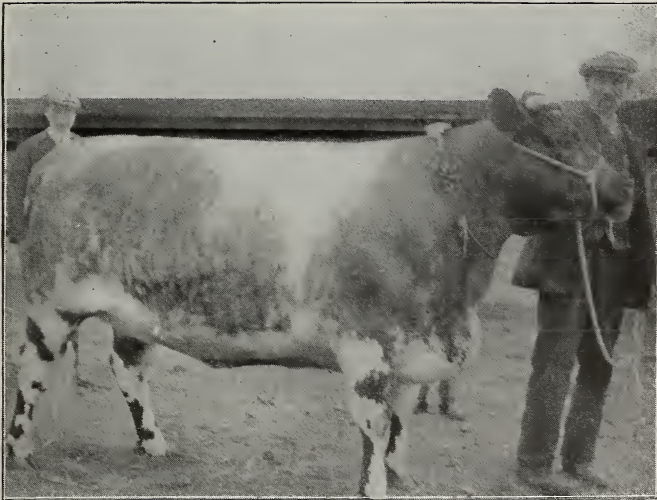
An educated, experienced, practical man is needed as county adviser. It is no job for a novice or a guesser. He

is expected to advise seasoned and calculating farmers with regard to the investment of their time and money, and the management of their land. If he is mistaken in his judgment or advocates some impracticable scheme his influence quickly fades. The responsibility he bears is a heavy one. The man who can fill the bill is worth a good salary.

The solid success already attained indicates that this work is destined to be a permanent feature of our agriculture. Farmers can well afford to pay one man in a county to study their interests and work out their problems of farm management. The saving in prices and the gain in composition of fertilizing materials, the saving in cost and gain in purity of clover and alfalfa seed, the eradication of oat smut and the suppression of hog cholera, are

merely examples of ways in which different county advisers have saved their farmers the amount of their salaries. The work was just started this summer in Tazewell county, but many farmers have been persuaded to try alfalfa, ground limestone and phosphate rock, and to erect silos. The county is a center of Percheron breeding, and already an association of over fifty members has been formed for co-operation in this line. No association of the kind ever made so strong a start.

It is a common remark among farmers that the high-priced land must be made to yield greater returns than it ever has done. A relatively small investment per farm in support of the county adviser is expected to yield a great return in increased crops, permanently productive fields and greater annual incomes—and it is doing it.



"WINDSOR BELLE," CHAMPION SHORTHORN AT ROYAL AND HIGHLAND SHOWS, THIS YEAR.

The Moral Background of Rural Organization

PROF. T. N. CARVER

Of the Rural Organization Service, Washington, D. C.

THEY who can not or will not work together are the natural and, one might almost say, the legitimate prey of those who can. Whether we like it or not, it is a law of life, a part of the economy of nature. There is no use kicking against it; the only thing to do is to conform to it. Unless we can manage to work together with our fellows we must expect to be preyed upon, governed, or exploited by those who can.

No people ever succeeded in governing themselves until they were able to work together. Until they learn that, they will be governed by some one else, either an outside power or a ruling class within their own members. So long as they quarrel among themselves or work at cross purposes, others who have learned the art of working together will rule and exploit them. Look at the Turks and the way they have ruled with a rod of iron over twenty times their own number of unwilling subjects. The Turks were united, their subjects were temperamentally unfit for combined action. How quickly the Turks were beaten when their enemies worked together, and how quickly they may return to power if their enemies remain divided.

It is as true in business as in government that the people who work together will rule or exploit those who work at cross purposes. That is one thing which ails the farmer at the present time. It is not necessarily true that farmers are more cantankerous than other people, though it sometimes seems so. But there are so many of them, they are so widely scattered, and they are so much more expert in deal-

ing with the forces of nature than with the forces of society, that it is physically more difficult for them to work together than it is for other classes. However, these natural obstacles in the way of united effort must be overcome by a greater wisdom and moral discipline than other classes possess, otherwise the farmer will always be at a disadvantage. That is what wisdom and moral qualities are for—to overcome difficulties.

Now we need not waste any sympathy on those who will not or can not work together. They get what they deserve. Of course we all have our own opinions as to what a good man or a bad man is like. We generally call him a good man who possesses the qualities which we admire, which is very likely to mean the qualities which we think that we possess. Looked at broadly and impersonally, however, the essential difference between good men and bad men is that the former are very careful of their own obligations and other people's rights, whereas the latter are very particular about their own rights and other people's obligations. Every great moral teacher has tried to make good men by telling them of their obligations and not of their rights. We are naturally so much inclined the other way that this is necessary in order to restore a proper equilibrium.

Now it is rather obvious, is it not, that people who are careful of their own obligations and other people's rights are easy to get along with. A community made up of such people can always work together. On the other hand, people who are very

particular about their own rights and other peoples' obligations are hard to get along with. A community made up of such people can't work together at all. We might almost say that such people have no rights and deserve to be exploited. However, the question becomes complicated when we have a community made up in part of people who would like to work with their neighbors and in part of people who will not.

The foregoing is written to show how closely the problem of organizing ru-

ral interests is bound up with the question of religion and morals. Unless the right moral influences are at work creating the spirit of working together and mutual helpfulness, no effective organization will be possible. The church, the school, the religious press, and every other moral agency must begin at the bottom by teaching people to be careful of their own obligations and of the rights of others, and overcome the tendency to be insistent upon our own rights and other peoples' obligations.



PROF. T. N. CARVER, Director of the Rural Organization Service, Washington, D. C.

Scotland Premier Live Stock Show

WILLIAM HISLOP
Of the Animal Husbandry Department

UNDER the auspices of the Highland and Agricultural Society of Scotland the 1913 Highland Show was held at Paisley, in Renfrewshire, from July 8th to July 11th. Unlike the large American shows, the venue of the Highland show is changed each year, but it is always held in a city, which is closely associated with some branch of the Live Stock Industry. Paisley is in the Clydesdale horse country, hence its selection.

During "Highland" week all roads lead to Paisley. From the landed gentry down to the small crafter, all are present. Judges in livestock, specialists in implements and machinery, and the very many, who are exceedingly minor professors of things in general, go to make up the crowds that throng the classic enclosure. For weeks beforehand, prospective exhibitors are discussing their probable chances and wondering how closely their ideals of show ring type agree with those of the judges. To breed a "Highland" winner is the greatest honor that can befall a Scotchman, hence the large amount of speculative enthusiasm, that pervades the stables and buyers throughout the country.

On entering the grounds, one is immediately impressed with the arrangements for the housing of stock. All animals of the same breed and age are placed together thereby facilitating comparison by visitors and buyers. This method increases the work of the herdsman many fold, for his aged bull will be here, while his two-year-old bull will be fifty yards further away, and his yearling heifers still further off. The same plan is followed in all British

Live Stock Shows. Furthermore, as soon as the decisions of the judges are made known, the prizes are nailed to the stall above the animal's head, and wherever there is a red ticket on view that means a first prize winner, while a blue card denotes a second place. By reason of this, the educational value of a visit to such an exposition is greatly enhanced.

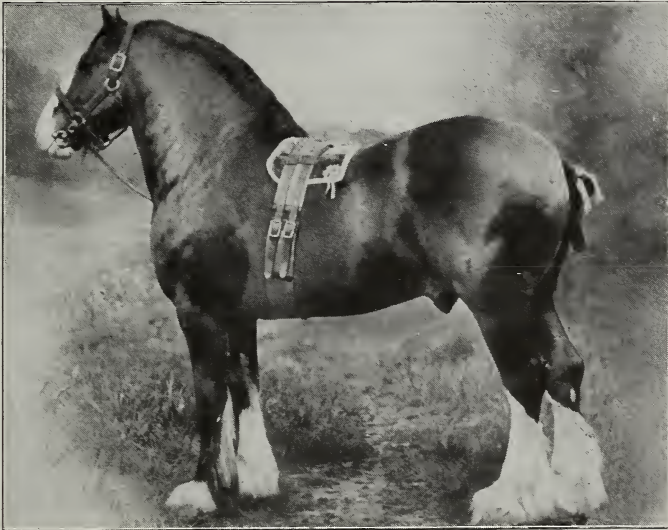
The actual judging of the stock is completed on the first day of the show, when extra admission is charged. Then it is that the real tit-bits are seen and the choicest epithets uttered by ring-side critics, for the main part, staid old farmers accustomed to looking at horses or cattle all their lives. Such men do not say much, but when they speak, they usually say something that is axiomatic and worthy of attention. Judging is proceeding all over the grounds at the same time. The animals are neither weighed nor examined by a veterinarian before entering the ring. It rests with the judges to detect unsoundness in horses.

On a first visit to British Live Stock Shows Americans are very much struck by the prominence given to agriculture, and especially to live stock by people of every class. All citizens are apparently interested and in close touch with the work of the British farmer and many of those in a financial position acquire land, either by purchase or by rental, and at once engage in the production of some class or several classes of animals. It is not unusual, then, to find that Great Britain's leading agriculturists are among the cleverest men of the nation, and it may be added that His Majesty, King George V., is

a leading prize winner at Britain's important live stock shows, with entries from his famous Herds, Studs and Flocks. The majority of the exhibitors, however, hail from the ranks of the tenant farmer. With them, it is a question of profit. They are in it to make it permanently profitable. They realize that the application of the fundamental principles of breeding, feeding and management are absolutely essential to successful stock raising, and since this is the perpetual and fundamental asset and industry of the coun-

ring, where they remain to the bitter end. Others find pleasure in watching the more slowly moving beef cattle. Others like to stay besides the sheep arena, while another brand finds itself unconsciously attached to the pig ring.

The Clydesdale is the sole draft horse breed shown at the Highland. The Shire and Suffolk Punch are never seen at Scotch shows and rarely in harness in Scotland. In the light-legged division, there are hunters and hackneys, Highland and Shetland ponies, polo ponies and army remounts.



“BARON'S PRIDE,” THE GREATEST CLYDESDALE SIRE THAT EVER LIVED.

try, they must see to it that it has its proper place. Such tenants are Mr. Wm. Dunlap of Dunure Mains, Ayr, who in 1912 paid \$47,500.00 for the famous Baron of Buchlyvie, and \$34,000.00 for Sareele; Mr. Wm. Duthie, of Tarves, Aberdeen; and the Montgomery Bros., of Netherhall and Banks, Kirkcudbright. These men are exhibitors and their names have become household words in the live stock world.

Nearly all of us have a preference for some particular kind of live stock. Some men hie themselves to the horse

On judging day, the Clydesdale ring is the center of attraction. There, one sees the true-going Clydesdale at his best. As usual the stock of Baron's Pride and Baron of Buchlyvie, his noted son, figured prominently in the prize lists, but such sires as Apukwa, Royal Favorite, Hiawatha and Scotland Yet, did well. Championship honors went to the two-year-old, Baron's Seal, a bay with white face and legs, sired by Baron's Pride out of a Mercutio mare. In close competition with him was Dunure Footprint, a roan by Baron of Buch-

lyvie, out an Auchienflower mare. The rivalry between them was keen. Many thought that the honors might have gone to the aged horse, but the judges decided in favor of the deep-ribbed, closely coupled son of Baron's Pride. Both are splendid types of the Clydesdale, possessing plenty of bone, without grossness and with comparative freedom of action. Neither could be called "tall" and it is pleasing to note that the number who place their faith in this type is becoming gradually less.

Amongst the females, Stephen Mitchell's Boquhan Lady Peggy was not on the circuit, however, J. E. Keer's Harvieston Phyllis, by Royal Favorite out of a Baron's Pride more, managed to carry off the female championship amid such strong competition as Nannie, Myrene, Dunure Ideal, the dam of Fotprint, and Anice, own sister to Harvieston Baroness, now in this country,

The Scotch breeds of cattle were forward in strong numbers.

The Shorthorn show was great. There was such a plethora of the reds, roans and whites that, at almost every turn one saw evidences of size, weight, symmetry, early maturity and feeding qualities. The champion female and the best Shorthorn of the show. "Windsor Belle," owned by His Majesty, King George V., is wellnigh perfect. She attracted more attention than any one animal in the show.

Woodend Stamp was made champion bull as he was the previous week at the "Royal." Both are members of the Clipper family. The aged bulls seemed to have more scale and substance, combined with quality, than many of

the bulls in America. It is but natural that this is so.

The "Blacks" made a very strong showing, but one had to visit the "Royal Northern" show at Aberdeen to see the real top-notchers of this breed. J. E. Keer's bull, Pride of Silesia, an Evica, fills the eye to perfection. He is meat to the hocks, and looked his part. The cows were big roomy specimens, and seemed capable of living up to the high traditions set by the "blacks and all blacks."

The Galloways were well represented likewise the West Highland breed. The latter with their shaggy, lang-colored coats and wide-spreading horns attracted the attention of everybody.

It is the policy of the managing committee to make the Highland Show as spectacular as possible. High class music by military bands helps to make it more enjoyable. Royalty are invited to inspect the show, which event never fails to augment the attendance.

In the forenoons, and again in the afternoons the prize-winning animals are paraded. Exhibitors must lead out prize winners on penalty of forfeiting the prizes. Daily jumping competitions never fail to attract attention. To satisfy the inner man splendid restaurant service is provided but good drinking water is at a premium.

The gates are closed daily at 6 P. M., and everyone goes home satisfied that the Highland Show is worthy of the world-wide patronage that it receives.

Note: Mr. Hislop spent the past summer in Scotland visiting the noted shows and live stock centers to be found there.—Editor.

The Futurity Principle

DONALD J. KAYS

Acting Head of the Animal Husbandry Department

A GREAT crowd of horse lovers had filled the grandstand and lined both sides of the race course at one of our Grand Circuit meetings. Seated on the fence along the speedway, a short way apart from the crowd and interestedly watching the events, were two of the oldest followers of the racing game. They had been talking about

interested in the classic events of our various speedways.

What are some of the other factors that have contributed in some degree to a live interest in racing? Trotting horse men have worked in the face of great odds to improve the American trotter and pacer, and even though their work be one intended for the chosen



“BOB” WATSON AND OHIO’S HERO

A Winning Combination in Eastern Percheron Futurity—Ohio State Fair, 1912.

the crowd and one finally asked the other: “What is the attraction about the trotting horse business that brings people from everywhere, to a kind of amusement that rarely pays and in which only the few having money may participate?” Then came the answer, “It is the innate love that all people have for good horses and a desire on the part of many to breed a fast trotter or pacer.” In other words, to breed a real purse winner, a horse that can make turf history worth while, this is the goal in view, that keeps many men

few, nevertheless, as an organization they have accomplished much. Their action in establishing Futurity events for colts, has promoted interest in racing events and stimulated activity on the part of breeders. Their offer of liberal purses to colts, that are fast enough to win Futurity events, has resulted in better care, development and training of trotting bred colts and has added much to their value at an early age. It has brought much advertisement to the sires and dams of these early performers and given to them their right-

ful prestige. In fact, the establishment of the Futurity Principle has brought about a new era in horse racing and has been an inspiration to all breeders, especially the little breeders, because of the financial encouragement it offers them.

Truly the Futurity Purse has been effective in stimulating trotting horse interests, but as applied to trotting horses alone, it has opportunity to minister unto the needs of comparatively few breeders of horses in this country. Since our draft breeds play such an important part in the operations of the average farm, how much more effective in its ministry unto the many, does the Futurity Purse become, when applied to our draft breeds of horse. For of all the breeds of horses that are in use, our draft breeds, from the livestock point of view, occupy the pre-eminent position. Notwithstanding the fact, that promoters of the motor truck business have prophesied the passing of the drafter, nevertheless, drafters of the right sort, combining style and service, are mighty easy to "peddle" at extreme prices. Reports from many big business firms in our cities, show that thus far, no mechanical device has been perfected, that in all instances satisfactorily supplants the draft horse. The motor truck age is here, but our drafters are still playing an important part on our farms and in the workday life of the cities. Wholesale mercantile houses, packers, brewers, coal dealers, contractors, lumbermen and all firms having heavy teaming work are after them. Such in brief is the status of affairs as concerns the demand of draft horses.

It is to the American farmer that we must look for a greater draft horse industry. What is being done by various breed organizations to promote

draft horse production and stimulate an active interest on the part of breeders? It is only of recent years that the Futurity Principle as applied to draft horses has been attempted. For the last three years the National Futurity for draft breeds has been held at Des Moines during the Iowa State Fair.

Entries in this show have been large and the competition keen. This year at Des Moines, there were thirty-three entries in the stallion show, truly a beautiful show of likely Percheron yearlings. The winner in the filly class was an American bred colt and sold immediately following the show for two thousand dollars.

The Futurity Principle, as a result of trial has been found popular. It advertises the colts, even tho they fail to get a share of the purse money. It gives interested breeders and buyers an opportunity to locate the good ones and is a great boom to the stallions and mares that are the sires and dams of these colts. This year at the International at Chicago, the Futurity Principle is to be tried out for the first time and a great show of young colts is expected. The International management is to appropriate two hundred dollars to each of the draft breeds and the same amount is to be furnished by each breed Association. Classes will be offered for yearling fillies and stallions, foaled in 1912.

For the last two years, the Ohio Percheron Horse Breeders Association has managed what is known as the Eastern Percheron Futurity. This Show of yearling colts has been held during the Ohio State Fair and has been the one Show in which an active interest has centered. This year there were two splendid classes of young colts, the stallion class numbering thirteen and the filly class having eleven entries. The

total Purse money distributed to winners of premiums in these classes, amounted to five hundred and four dollars. For next year, plans are on foot to increase this amount of purse money and further stimulate the interest of Percheron Breeders. The Futurity Principle as applied to our heavy

breeds of horses, at our various shows, is simply a door of opportunity, that is thrown open to breeders of draft horses. By means of active part in Futurity competitions, the wide awake breeder becomes a "booster" of his own personal interests and at the same time, promotes a work that makes for a better draft horse industry.



When the frost is on the punkin and the fodder's in the shock,
And you hear the kyouck and gobble of the struttin' turkey-cock,
O, it's then's the times a feller is a-feelin' at his best,
With the risin' sun to greet him from a night of peaceful rest,
As he leaves the house, bareheaded, and goes out to feed the stock,
When the frost is on the punkin and the fodder's in the shock.

Jas. Whitcomb Riley.

History of the Ohio Experiment Station

S. W. BILSING

THE passing of the old Horticultural Building and the coming change of the Department of Botany from the Old Botany Building to the new Biological Hall brings to notice a bit of history which is of much interest.

Like many other of our institutions the Experiment Station had its beginning in Europe. Several stations were established in Europe prior to 1850. The one after which American institutions were modeled was established in 1851 at Moeckern near Leipzig in Germany. This station was established and financed by a few enthusiastic tillers of the soil until it might be aided by the government. Before this time the famous Rothhamsted Station had been established near Harpenden, England. Sir John Bennet Lewes was the founder and he was assisted by Dr. J. E. Gilbert as chemist.

The results of the work of these stations in Europe was much talked of in this country. The first step taken toward founding an Experiment Station in the United States was made by the New York legislature. In 1845 the legislature of that state provided for an "Experiment Farm." This was six years after the establishment of the Rothhamsted station and two years before the establishment of the station at Moeckhern. So it is seen that the U. S. was a pioneer in the establishment of a system of experiment stations such as no country in the world has at present.

The results of these first experiments at the N. Y. experiment farm were published in the newspapers at that time.

The Agricultural Colleges in the various States which were established under the Land Grant Act of 1862 early

realized the need of some form of experimentation and began an agitation for regularly established experiment stations. In 1873, S. W. Johnson and W. O. Atwater led a movement to establish an experiment station in Connecticut. A bill to create an Experiment Station was introduced into the legislature of that state in 1874 but failed to pass. In 1875 the legislature made the appropriation and started scientific work and was thus the first state to establish a regularly endowed experiment station. Connecticut was followed by North Carolina, New Jersey, New York and Ohio—Ohio being the fifth state to establish a station.

The Ohio Experiment Station was organized under an Act of the General Assembly of Ohio passed April 17, 1882. This act was supplemented by two acts of Congress approved March 2, 1887, and March 16, 1906. Massachusetts organized a station in 1882. Alabama and Wisconsin in 1883. Nebraska in 1884, Michigan, Indiana, Kentucky Maine and Minnesota in 1885. In Louisiana a private Sugar Planter Station was organized in 1886. This brings us up to the nationalizing of the movement.

The increasing demand and interest in Experiment Stations and research work expressed itself more and more in a demand for support by the federal government. This demand culminated in a bill introduced into Congress by Hon. C. C. Carpenter of Iowa. This bill failed to pass so another bill similar to it was introduced by Hon. Wm. Cullen of Illinois. Still later another bill was introduced by Wm. Hatch of Missouri. A convention of Agricultural

Colleges and Experiment Stations took an active part in the support of this bill and it was finally passed in 1887.

Thus the first national system of Experiment Stations came into existence. The Hatch Act provided for the establishment of one Experiment Station in each state and territory in connection with the Land Grant College and was to be a part of it. This bill gave rise to our conception that a College is an institution which shall not only teach but also discover truth. For carrying on such work Congress appropriated \$15,000 annually for each state and territory. The money was to come from the sale of public lands. One-fifth of the first annual appropriation might be spent for the erection of buildings. After that an amount not to exceed five per cent of the total appropriation.

The Hatch Act was amended in 1906 by the Adams Act which provided that each state was to receive \$5,000 additional and an increase of \$2,000 per year for the five succeeding years. After that an annual appropriation of \$30,000 a year was provided to be used only in conducting original research.

The appropriation according to the Adams Act was to be paid out of the U. S. Treasury and was subject to the approval of the said states and territories.

These initial efforts at founding an experiment station in Ohio were mainly due to the untiring energy of Prof. Wm. Lazenby. Prior to this time Prof. Lazenby had been Assistant Professor of Horticulture at Cornell University and while there was secretary of a club of University Professors and Students which drafted a bill which they presented to the New York legislature asking for an appropriation of \$10,000 to establish an Experiment Station. The legislature not

only passed the bill but voted \$20,000 for the establishment of the station. Soon after this Prof. Lazenby came to Ohio State to be Professor of Botany and Horticulture.

Here he drafted a bill upon his own initiative and through the influence of Col. Brigham the legislature passed the bill creating an Experiment Station in connection with the University. The first appropriation of \$3,000 was to be used only in original research. At this time the University erected the Botany Building at a cost of \$15,000. And this building was the headquarters of the Experiment Station with Prof. Lazenby as its first director.

The initial appropriation of \$3,000 was not sufficient to permit the purchase of land or equipment and the station was dependent upon the University for sometime. The Board of Trustees of the University gave 30 acres to the Station to be used in experimental work. The first Experiment Farm extended from the path leading from Eleventh Avenue to the Ohio Union on the east to Neil Avenue on the west. Here some of the first field experiments with fertilizers in this country were carried on.

The Botany Building was fitted up with small offices and the work began. The property of the station at this time consisted of a few microscopes seed testers, weighing apparatus and office furniture.

The Station was permitted to use a team of horses and such tools belonging to the University as were needed in field work.

The Station paid part of the salary of the Agricultural Chemist of the University and so obtained his services in carrying on experimentation along chemical lines. Although the Station was

greatly handicapped by lack of funds and equipment much good was accomplished by these early endeavors at experimentation. Many bulletins were prepared, most of them for publication in the newspapers which were the most available medium thru which the results of the Station work could be disseminated.

After the passage of the Hatch Act in 1887, the directorate of the Station passed from Prof. Lazenby to Chas. E. Thorne who is at present director. At this time all of the tillable land of the University farm which then consisted of 165 acres, was placed at the Station's disposal without rent.

Soon after this the Board of Control requested the Legislature to authorize the removal of the station to what they deemed a more suitable location. In 1891 this authority was granted thru an Act which empowered the Commissioners of any county which wished to secure the location of the State Experiment Station in their County to raise money for such a donation by fixing a tax on all taxable property, the amount of the tax to be fixed by the commissioners of the various counties. Wayne, Clark and Warren counties donated the sum of \$85,000, \$75,000 and \$40,000 respectively so it was decided Wayne County should get the Experiment Station. The Board of Control purchased 425 acres of land situated one mile south of the city of Wooster. Later

this was increased to 470 acres. The transfer of the station from Columbus to Wooster was made in the Spring of 1892. Temporary offices were first secured in Wooster until the necessary buildings could be erected on the station farm. The greenhouses were erected the first year. In 1893 a complete drainage system was installed for plot work. In 1894, the dairy barn was erected and in 1895 the administration building was begun. In 1897 it was finished and dedicated on June 3, of that year.

In addition to the Wooster Farm, the Station now owns 300 acres at Carpenter, Meigs County. It leases 185 acre at Strongsville, Cuyahoga County, and 53 acres at Germantown, Montgomery County.

The reader will note that the passing of the Horticultural and Botanical Buildings mark a period in Agricultural Experimentation which is significant. That these buildings have to a greater or less extent served thir purpose is evident, that they are dear to many of the older members of the faculty is also evident. And altho they both must eventually be torn down to meet the demands of a higher and greater Agriculture, we will still remember them as landmarks not only in the State and National movement of experimentation but also being pioneer landmarks in world wide experimentation.

October turned my maple's leaves to gold;
The most are gone now; here and there one lingers;
Soon these will slip from out the twig's weak hold,
Like coins between a dying miser's fingers.

Should the Ohio Experiment Station Be Moved?

DIRECTOR CHAS. E. THORNE

PERSONS unacquainted with the work of the Ohio Agricultural Experiment Station often raise the question whether the Station ought not to be returned to Columbus, in order that its work might be more accessible to the students of the College of Agriculture.

The reply to this question is that the Station was originally located at Columbus on the farm belonging to the Ohio State University, from whence it was removed because the land of that

ing the ten years over which the Experiment Station was located on this farm the average yields of corn and wheat were about 60 and 30 bushels respectively, or nearly double the average wheat yield. But it cannot be successfully disputed that the increase of production of Ohio's soils overshadows in importance all other projects for agricultural betterment. Admitting freely the vital importance of amelioration of those conditions which make for a higher standard in rural life, it re-



MAIN BUILDING AT THE OHIO EXPERIMENT STATION.

farm was found not to be adapted to the purposes of scientific field experiment and because it had become evident that the necessities of the city and of the University were such that no hope could be entertained of establishing such research on that farm upon a permanent basis.

The land comprising the University farm lies in the Valley of the Olentangy River. A large part of it is subject to overflow, while the remainder consists of what is known as second bottom—a class of soil recognized everywhere as of exceptional fertility. Dur-

ing the ten years over which the Experiment Station was located on this farm the average yields of corn and wheat were about 60 and 30 bushels respectively, or nearly double the average wheat yield. But it cannot be successfully disputed that the increase of production of Ohio's soils overshadows in importance all other projects for agricultural betterment. Admitting freely the vital importance of amelioration of those conditions which make for a higher standard in rural life, it re-

mains all the more true that soil improvement comes first, for it is only as the soil is made to return a more liberal recompense to the farmer for his labor that we can hope for improvement in social conditions. Moreover, it had become evident that a period of development was opening before the University, and that the land occupied by the Station would soon be required for other purposes, and this expectation has been fully realized. The areas on which the most important work of the Station was located have long ago been occupied by buildings,

and other areas have been rendered useless for experimental purposes by the construction through them of streets and city sewers.

But, it will be answered, less fertile land could have been secured a few miles away; and this is true, in so far as the question of comparative productiveness is concerned; but this is not the only question which must be considered in choosing a location for scientific field investigation—that is, for investigation designed to discover fundamental principles. For such purposes there must be considerable areas of land of the greatest attainable uniformity in formation, topography and history. But the Experiment Station did not have money with which to go out and select land for its purpose. Twenty-two years ago, when it became fully realized that the Station must prepare for removal, it was still in the experimental stage, and little more could be said of the College of Agriculture. No legislature at that time would have had the courage to appropriate sufficient money to the Station to provide a home for it, and hence the counties of the State were authorized to provide such a home by referendum proceedings.

Under this authority offers came from Wayne and Clark Counties. Clark was nearer to Columbus and more accessible generally than Wayne, and personal reasons strongly inclined those charged with relocating the Station to accept the offer of Clark. But it was realized that the opportunity for successful work was very much greater in Wayne than in Clark. Franklin County made no offer, but Franklin County could not have furnished the conditions found in Wayne. It was this fact, that the soil conditions found in Wayne County offered an exceptional

opportunity for the conduct of field research, that decided the location; and twenty years experience on this soil has abundantly justified that decision.

The Ohio Experiment Station's field investigations in soil fertility have now been in progress in Wayne County for twenty years. When they were begun, there were many who denied the possibility of successfully employing field experiment as a medium of scientific research. This was because such experiments had hitherto been conducted on unsuitable soils, or without sufficient checks, or over too short a period of time. If the Ohio experiments have served in any degree to raise this form of research into a higher place in the estimation of scientific investigators, it has been primarily because of the opportunity given to select a location for this work after ten years experience had shown its requirements and its limitations.

A chemist, with the crude equipment to be found in a kitchen, may get such suggestive results as those which were the foundation of the great Rothamsted Experiment Station; but if these results are to be followed to exact conclusions there must be equipment for research of a very different sort. Experiments with fertilizers and manures may be made on any farm, but investigations which are to be made a safe guide for farmers everywhere must be carried out under the most exact control that it is possible to attain.

For these reasons the removal of the Ohio Experiment Station from the University farm was an absolute necessity, unless it should abandon field research and limit its work to the laboratory. I believe then and still believe that the special mission of the Ohio Experiment Station lay and still lies in the field.

This, then, is the answer to those who

think the Ohio Experiment Station should have remained on the University farm or in Franklin County, or should return there now:

First: That the Station could not have remained on the University farm except as a Laboratory Station, and as a laboratory station it could not have been expected to accomplish results of any greater value to the students of the College of Agriculture than have been accomplished in the laboratories of that College. Indeed the Station's researches would have had far less instructional value than the splendid work which has been done by Professors Vivian, McCall and others.

Second: That the Station could not have accomplished the results on the soil of Franklin County that it has attained at its present location, even had Franklin County offered a home, which it did not.

It follows, therefore, that the removal of the Station was necessary to its own progress, and that, therefore, such removal was equally necessary to the University and to the students of the College of Agriculture.

It is very true that these students ought to make greater use of the Station than they are doing, but the way to accomplish this is not by moving the Station. It is not the Station's labora-

tories that the students are interested in, but its fields; and these fields, with their twenty years of exact treatment and their previous millenniums of formation cannot be moved to Franklin County. It would be possible to move the fifty odd buildings of the University to Wayne County and rebuild them, stone upon stone, and brick upon brick; but the 150 acres of the Station's scientific plot work cannot be moved.

In engineering schools of the highest grade students in the Junior and Senior years, in mechanical, mining and electrical engineering, are required to spend large sums in traveling to visit manufactories, mines and engineering works. It should be looked upon as no more a hardship for student in agricultural engineering to be required to become acquainted with the work of their Experiment Stations.

Another point in this connection is that the Ohio Experiment Station's work is not all done in Wayne County. On each of its eight outlying farms, located in as many counties, work is being conducted differing in character from that at the main station, sometimes impossible of successful conduct there. The time will come when the students of the Ohio College of Agriculture will be required to familiarize themselves with all this work as a prerequisite to graduation.

October's gold is dim—the forests rot,
The weary rain falls ceaseless, while the day
Is wrapped in damp.

David Gray.

The Threshing Industry

CLAYTON WINDAU, '14

THRESHING is one of the oldest and most important economic factors in the production of utilities for man.

In the earliest times the little grain that was raised was threshed by hand. But as the quantity increased, the grain was beaten out with a stick or the sheaf beaten upon the ground. The But as the quantity increased, the grain out over an enclosure of hard ground fifty to one hundred feet in diameter, and driving oxen, sheep or other animals round and round over it so as to tread out the grain. This enclosure was elevated so that when the straw was removed the wind blew away the chaff and left the grain.

This was superseded by the threshing sledge a heavy frame mounted with three or more rollers sometimes spiked which revolved, as it was drawn over the grain by two oxen.

Doubtless the flail evolved from the early method of using the stick. It was made of two pieces of wood, the hand staff or helve, and the beater fastened together at one end by a thong of raw hide or eelskin. The length of the handstaff enabled the operator to stand in an upright position while working. Thirty or forty strokes per minute was the average speed. The straw was then carefully raked away and the grain tossed into the air so that the wind carried the away the chaff while the grain fell back to the floor. All ancient barns were constructed with large doors opening in the direction of the prevailing wind so that it could blow through the barn. A day's work averaged about eight bushels of wheat, thirty of oats, and sixteen of barley.

In 1732 Michael Mengies, a Scotchman, obtained a patent for a power driven machine. The machine was driven with a water wheel, which put in motion a number of flails of the same kind as those used in threshing by hand. This worked for a time, but was not particularly successful.

A Scottish farmer named Leekie made a second attempt. His machine had an upright shaft with four arms enclosed in a cylinder, three and a half feet in height and eight feet in diameter, within which the shaft and its arms were turned with considerable velocity by a water wheel. The sheaves being presented by hand were let down from the top upon the arms by which the grain was beaten out and together with the straw descended through an opening in the floor, where they were separated by riddles and fanners also turned by the water wheel. The machine demonstrated the superiority of the rotary motion and pointed out the lines on which the machines could be built.

Mr. Andrew Mickel in 1786 conceived the idea of separating the grain by feeding it through two fluted revolving rollers to a beating cylinder revolving about two hundred to two hundred and fifty revolutions per minute. The grain was then carried to a concave sieve beneath another revolving drum with pegs which rubbed the straw on the concave and caused the grain to fall through. The straw passing along under one drum and over the next was thoroughly threshed out. This machine proved satisfactory and its superiority still remains and is likely ever to do so.

All American machines are simply a modification of this peg mill principle.

In about eighteen hundred a machine was invented which threshed, cleaned and delivered the grain at one operation.

Our present machine, equipped with self feeders and band cutters, automatic weighers and wind stackers, is a wonderful piece of mechanism. These new devices have added largely to the convenience and efficiency in the threshing operation. However, they are subject to much abuse. Men will pitch onto a self feeder in a way that would not be tolerated under the hand system. For this important position

an efficient stack by the blower alone. The greatest difficulty is in building up the side farthest from the machine. This difficulty can be overcome by erecting poles and nailing on a few rough boards to blow the straw against. This side is then always kept highest. However, one man on the stack to shape up the sides is a great help to the blowers. He should not get near the edge of the stack than the length of his fork handle, keeping the middle well tramped. The outside will then settle faster than the inside and form a natural watershed. This outside straw is quite loose



“THE CROON OF THE THRESHING MACHINE HAUNTS ME STILL.”

the farmer should select two of the best men obtainable. Only when the bundles are placed on the feeder properly, can the machine be adjusted to do the maximum amount of work, both for the farmer and the thresher.

With the automatic half bushel weigher the farmer and thresher both get a square deal. It is no longer necessary for the farmer to select his largest bags to be used over and over in measuring the grain.

The wind stacker is a great saver of labor when compared with the old style straw carrier. It requires considerable skill and a favorable wind to build

and can easily be pulled out when wanted.

The inception of new threshing machinery has brought about the custom of shock threshing. It is very convenient for the farmer to have his grain in the bin at as early a date as possible. It is quite a costly operation, however, and he must run the chances of his grain being in a fit condition to thresh. Many farmers simply will thresh no matter what the conditions are just to get the job out of the way.

Stacking grain is becoming a lost art. No longer do we see rows of grain stacks standing until late in the fall as

was done in the days when the horsepower was in vogue. In those days grain was always threshed when in good condition, the threshing season extending far into the winter.

Now as soon as the wheat fields begin to show a yellowish tinge, farmers engage the services of a thresher. Everybody is anxious to be first one finished. The thresherman, in order to satisfy demand works early and late and in some instances all night, putting in forty hours at one session.

A thresherman leads rather a hard

life. He works long hours always in dirt and grease. He eats at times fit for a king, at other times such food as would not tempt a hungry tramp. It is a life for one who loves variety there being a decided lack of monotony. He sees new faces, eats at different tables, hears new stories, plays new jokes every day. Then there is something about the croon of a threshing machine that haunts one and tempts one to follow the business year after year. Since variety is the spice of life, he truly leads a spicy life.

In the Indian Summer Time

By CLINTON SCOLLARD

Gracefully they float and fall,
Shining shallops of the leaves;
Like a tender madrigal
Cries the wind about the eaves;
Stacked and stored are all the sheaves
'Gainst the days of rain and rime,
Yet where is the heart that grieves
In the Indian Summer time!

O'er the hills an amber haze;
Banded birds on southward wing;
Russet robes on meadow-ways
Once a-spangle with the spring;
Hark!—a softly silver string!—
'Tis the brook, its lyric chime!
Beauty glammers everything
In the Indian Summer time!

Life goes lapsing like a dream—
Happiness too sweet to last!
Let us glory in the gleam
Like a halo round us cast!
Facing winter's blight and blast—
Rigors of a rugged clime—
We have treasure in the past,
In the Indian Summer time!

The Lure of Autumn

TOM L. SMITH, '14

HAVE you ever noticed in a man's face that indescribable masklike something, which is pleading to get away from this world's strife and wealth and power and cares, that expression that denotes a need for the elemental things of life? Back in an eastern Ohio steel town one day, a man with a face like this, sat in his office. His hat was on and his hands busy with the papers at the desk. Power and wealth, high position and a happy home were some of the things John Searight had been blessed with and yet as I sat in his office on this day early in October I saw that same old narrowness of his eyes, that hardness of his lips and masklike expression which I had noticed many times, the last few weeks, and I knew he needed a change.

Somebody has said "Man to replenish his vital forces must forever go back to elemental things, to the sunlight, pure air and bodily activity," and so it happened when I suggested a trip to the country and a farm that afternoon the steel manager jumped at the chance and it was still early afternoon when we climbed into an automobile and leaving behind us the din and crash and roar and grind and heat of the steel plant, crept cautiously through the bustle and traffic of the down town streets, out along the avenues and boulevards flanked with palatial homes and well kept lawns into the country, made glorious by Autumn's artists.

What a relief it was to leave the city behind. It seems to me we feel the autumn only in the country, because there is so much of harvest in it, so much of nature's reward shown in her liberal giving back and multiplying where men has worked with brain and

hands. The breath of the furrow, the smell of the autumn woods spell a joy of living that the city never can equal. Now as went rolling along into God's country over the white macadam road between pastures turning brown, past forlorn looking truck patches, by hay stacks and woodlots, by white schools and churches, poor farms and good, over bridges and past grave-yards; the wind, laden with its leafy burden, blew into our faces. Here and there we passed by men working on the road and saw strong teams buckling to their burdens of dirt, and men with fire arms, and dogs, and nutting parties, and children playing by the side of the way. But that which interested me most of all these things was the look of anticipation which had come over Searight's face. Like the turning of the long black furrows in the stubble fields in preparation for another season, so was he preparing for a new hold on life.

Presently we came to where an old stone fence lined the road and here we left the machine and wandered up the lane that led into the farm. A striking lane it was, even in this autumn season, bordered on the left with hardy hydrangeas shrinking so it seemed into their soft covering of manure, while on the right a stately row of poplars stood. Forever our bodies will cry out for the healing of nature and that is why our blood runs a little faster through our veins when we realize her joys. All around us here autumn was showing herself, in the afternoon sun pouring down the sweetest sunshine of the year, in the rabbit old and lame which limped across our path, in the rustling of the flies among the painted leaves, in the ripening corn fields and the solemn

woods. Out yonder in the corn field the giant jaws of a corn binder was eating the long tall rows of corn and already we could see the shocks studding the acreage and pumpkins gleaming gold from out the corn.

We walked behind the barn where the harsh roar of the silage cutter at its work was heard above all else. We picked our steps through the litter of the barnyard and past the calves licking one another as they stood beside the gate. Within the barn we smelled the odor of sweet new milk and heard the pleasant tramping of the stock and the grind of stanchion chains and everything was pleasing to both of us. Surely industry of the finest type was displayed everywhere and yet how different it was from the kind of industry we had left behind a few hours ago, where men were slinging together brick and mortar and steel and concrete. Out here all nature's powers lent a hand to make the harvest of the autumn possible.

By and by we wandered up towards the house. An odor above all other autumn odors greeted us. Somebody was making apple butter and soon we came upon an old lady heavily shawled, stirring a huge kettle of it. John questioned her all about her winter store of jellies, jam and pickles and about the antique old oven where her kettle rested, and the hard look on his face was lost, for he had found his rest cure. About our feet the chickens scurried, sort of shrinking into their feathers as if mindful that winter was coming.

From where we stood we had a wonderful view of the farm and all the

country side. Out in the orchard, piles of red and yellow apples dotted the ground or filled the heaping barrels amidst the creak of limb and ladder where the pickers toiled. Beside the house a garden cleared of trash and rubbish seemed to nestle warmly in a new coat of barn manure, and the wet yellow leaves of strawberries and other plants peered through their bed of straw. Out there in the pasture lot the young cattle were scattering and shifting towards the woods in the distance, untroubled now by heat or insect foes. The woods I think were best of all. There is such an air of mystery in that scene of whirling gaiety as nature continues to put off her summer robes and prepare for her winter sleep. The turkeys strut about such woods as though they owned them and the squirrels are in their glory among the hickory and walnut trees. When nature thus disrobes the farmer's heart is warm in thinking of his safely gathered crops and stock well fed and sheltered.

Our hearts too were glad as we started back toward the city, although the parting from this country joy was hard, I had learned this lesson, that though man may toil with wood and stone and ore and make them all subject to their power, they cannot mould the life and breath, like nature does and make the country side a thing to worship in the autumn. All of his jewelry and gold, his club houses and mansions, his velvet and mahogany, his power in business or his social position, none of these could bring to John Searight the extreme happiness that this one afternoon's outing with autumn had brought. Verily red cheeks made by autumn are a treasure.

Cleveland's Retail Markets

C. G. CARPENTER, '14

IN these days of high priced food-stuffs, the problem of a more quick and complete distribution of the fruit and vegetable foods at a low cost is ever becoming of more importance in our cities. To be sure, the commission houses, the jobbers, the grocers, and the hucksters are quite able to do the distributing—and they must do their share or go out of business—but at the same time they are adapting at adding numerous small items to the price of otherwise cheap products. To reduce as much as possible these overhead charges on their food supplies, many of our cities, following the plan long established in Europe, have constructed public marketplaces. These are of all kinds and descriptions; varying from “a maple tree and a wagon scale” in Travers City, Mich., to the immense Lexington market-house in Baltimore which is visited by over fifty thousand people on market days.

In our own state, the more successful—and to the community the more profitable—markets are those of our northern metropolis, Cleveland. There, on the south shore of Lake Erie is the sixth city in the country with a population of over five hundred thousand living in an area of forty-five square miles. Within a radius of forty miles there are the homes of at least eight hundred thousand people. To handle the great amount of produce used by this population, there has been developed a well defined market district on Broadway, Woodland and adjacent streets. There are two large market houses in this district and the city has just opened a still larger building on the west side where there is a similar

district growing up. Meats, dairy products, vegetables and fruit are sold in these markets; all sales being to the consumer at retail. The dairy products are in part made where they are sold, while most of the meat and all fruit are shipped in. The vegetables are not extensively sold in the houses but are disposed of on the curb market.

The old market house on Broadway, is of the general type of fifty years ago: a long shed like roof supported on rather low walls. The interior is arranged with several rows of stands on which are displayed all sorts of merchandise. Although there is supposed to be some order in the grouping of the different classes of dealers; I have seen in consecutive stalls, cheese, flowers, meats, butter and eggs, fish, gloves and socks, and fruits. Outside along the curb the fruit dealers line up their wagons and sell their goods over portable counters under the edge of the roof.

About a block away is a much larger privately owned market. This is a modern, three story building. It contains an up-to-date cold storage plant and the Cleveland plant of the Medina Creamery Co. is located here. This part of the building is separated from the rest by a plate glass partition so that the public can see all the operations from testing the cream to packing the butter. The dealers in this market cater to a higher class of customers than those of the old market on Broadway. This is most noticeable in the increased number of booths flowers and fancy fruits and in the greater attractiveness of both the booths and the products sold.

On the west side, on W. 25th St. is the new market house which is justly claimed to be the most modern, the most sanitary, and the most beautiful in Ohio at least. It was opened last November and it cost the city \$500,000 exclusive of the site which makes the total cost nearly \$700,000. The stalls

majority of the dealers here handle either meats or fresh fish, or poultry, eggs and butter.

Although there are some fifteen hundred booths in the three large market houses, by far the larger part of the vegetables grown within twenty-five miles of the city are sold by the farm-



IT IS ESSENTIAL THAT THE PRODUCERS AND THE HORDES OF CONSUMERS CO-OPERATE.

are larger than in most markets and are all of uniform size and equipment. Each one is built of enameled brick with marble counters and concrete floors inside. The aisle floors are of tile, and the whole building is lined with white tile. In order to discourage the expensive delivery system there are no telephones in the booths. The ma-

ers on the curb market, to hucksters who peddle them out during the forenoon. Each farmer is allowed seven feet of curb for which he pays or is supposed to pay ten dollars a year. The curb market stretches out Woodland Ave. for more than a mile and to a less extent out Broadway and Kinsman Road. I am now referring to the

night market. The day market occupies the same streets, but does not extend so far out. The methods of distribution on this night market are somewhat out of the ordinary and may perhaps be best shown by tracing some product from the farm to the consumer.

We will begin with sweet corn in the field. Just after noon the corn will be picked and packed in the market wagon. If the distance to the city is say twenty-five miles, the trip is begun at about six o'clock in the evening. This allows plenty of time to reach the city limits before midnight, which is quite necessary if the driver is to care for his team properly. By one o'clock the wagon has been backed up to the curb on Woodland Ave. and the team stabled. The farmers are lined up on one side of the street and on the other are the wagons of the hucksters who buy their supplies for the day just as day begins. For the next three hours the Syrians, Italians, and Jews jostle around the wagons, talking in a dozen dialect of makeshift English. Usually one of them who has had considerable experience does the buying for perhaps a dozen. Ordinarily the market "is sold out" by four o'clock and the hucksters depart one by one. Then just as the eastern sky begins to show a gray light that turns the flare of the steel mills to a sickly yellow, the farmer pockets his cash and heads for the nearest all night restaurant. He has now only to hook up his team, and turn

in after a twenty hour day. The horses will take him home while he "enjoys" a well earned sleep in the wagon.

On the day market, conditions are different. Now instead of whole loads of one thing we find half a dozen or more vegetables or fruits in one load. These loads arrive at six or seven in the morning and are sold to the consumer directly from the wagon. Sometimes when the demand is good a load may sell out long before noon. Again the supply may be large and the loads brought to the night market will be held over to the day market in the vain hope of getting a better price. This more often results in such a supply in the forenoon that it can not be sold, but in the end goes to the garbage plant. Of course this does not often happen, but I have frequently seen corn sell for sixteen cents at two o'clock in the morning and for less than twelve cents before noon.

It seems, however, that the real value of a public market place in a large city is not as a place for the farmer and gardener to dispose of their products at a good price; but that it is a means of distributing the fresh products of the farm and garden to the most people at the lowest cost for distribution. If it does this, the price will take care of itself in a way satisfactory to all concerned. That the markets of the Sixth City do this there is no doubt.

Then let us clasp hands as we walk together,
And let us speak softly, in low, sweet tones,
For no man knows on the morrow whether
We two pass on, or but one alone.

Ella Wheeler Wilcox.

The Ohio State Fair Judging Contest

BYRON E. PONTIUS, '14

THROUGH the courtesy of Hon. A. P. Sandles and the State Fair Board, Prof. C. S. Plumb head of the department of Animal Husbandry was able to make arrangements for a Students' Judging Contest at the State Fair. The contest was open to all students of the Agricultural College who were not first and second prize winners in any one class in a previous contest.

One hundred dollars in prize money was offered and four classes were made up consisting of two rings each of cattle and hogs and one each of horses and sheep. Oral reasons were given on the last two.

The contest was held Tuesday, September 2, and 18 students entered. Exhibitors gladly furnished the stock for the work. Prof. W. H. Palmer had the work in charge and he was ably assisted by Professors Wm. Hislop, Gilbert Gusler and James Wiley. The competition was keen from the very start as the results show and it is to be noted that eleven men came in for a share in the prize money.

The Classes and Results.

Horses — Two-year-old Percheron stallions (reasons given): First, J. W. Henceroth; second (tied), E. R. Hoftyzer, G. D. Norton.

Cattle—Senior bull calves (Short-horn), Senior yearling Hereford heifers: First, George Little; second (tied), G. D. Howell, C. E. McAnall.

Sheep—Yearling Shropshire rams (reasons given): First, B. E. Pontius; second, R. Q. Smith; third, J. W. Henceroth.

Hogs—Yorkshire gilts, Berkshire barrows: First (equal), R. Q. Smith, H. C. Baumgardner, J. V. Lowe, M. D. Helsner.

J. W. Henceroth was high man in the contest, winning first on horses with a score of 95 points and third on sheep. R. Q. Smith was second high man, being tied with three others for first on hogs and winning second on sheep. George Little and B. E. Pontius tied for third place, the former winning first on cattle and the latter first on sheep.

A great amount of interest was shown in the contest and there should be even more, for here is a chance to work on some of the very best stock in the State. Each ring the contestants had to work on was first-class material. Surely every student who is interested in live stock should be interested in such contests, as the opportunity for experience in judging is ideal. We hope that still a larger number will compete next year.

It is probable that if the contest was held later in the week that more students could attend, as many come to the fair later in the week than Tuesday. Why not have it next year on Ohio State Day, for a greater number of State people attend and it would be pleasing to many ex-students and alumni to watch the contest?

The farmers are the founders of civilization and prosperity.

Daniel Webster.



OHIO STATE UNIVERSITY

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COLUMBUS, OHIO, OCTOBER, 1913.

Editorial

"Here's a hand, my trusty fiere
And gie's a hand o' thine."

Thus with Burns do we greet you—
Freshman or Upper Classman, the same.

That was a great stroke
GREETINGS. you made when first you
left home. Your future

life will date from the day you said
good-bye to the home folks. True, you
will go home again, but as a visitor
rather than as a member of the home
circle. You have broken the home ties
and must assume new ones. This is, in-
deed, an important step in your career.
The first few months will largely de-
termine your future. Now you are be-
ing tested. Will you stand or fall? It
rests largely with you, Mr. Freshman.
On you and you alone lies the burden
of proof and with you, too, there is the
solution.

Whatever you do, whatever the
course you pursue, remember that the
prime object of your being here, is that

you may become a better citizen and
not that you may be educated so as to
make a livelihood with less effort. Re-
member, that your class card is your
contract—a contract to be sacredly
kept. Be faithful in your classroom
work, take a reasonable part in college
affairs, and above all stand firm for the
right in the college, in the classroom,
or in the athletic contest. Be a man.
Be a worker. Get acquainted with your
classmates, your professors and form a
few real friendships at Ohio State.

Get the Ohio State spirit. Play your
part as a man and play is well.

In the education and development of
a child, psychologists tell us, there are
certain periods of

OUR AGRICUL- rapid advance-
TURAL COLLEGE. ment alternating
with periods of
seemingly no development. Represent-
ing a person's life diagrammatically it

would be a line running horizontally for a distance, then taking a rapid spurt upward, then horizontally, then upward, and so on during the growth and development of the individual. During these periods of rapid advancement the individual is apt to lose control of himself. Sometimes we say, "He does not know where he is."

The Agricultural College at Ohio State has taken a rapid spurt within the last few years. The Trustees, the Legislature, the people of Ohio, even our own Faculty have been outstripped by the growth of the College. Few people realize what a big proposition, what a tremendous task it is to take care of the large enrollment in the College of Agriculture. The College is on one of the upward curves in its history and is rapidly outstripping its management, its finances, its friends, and supporters.

Recently we have heard some unfriendly criticism of the College. However, few have stopped to inquire into the real facts of the case. Just look at a few figures. Six years ago, or in 1907, the enrollment exclusive of the Winter Course was 282 and the instructional force was 19. In 1912 the enrollment had increased to 1046 and the instructional force to only 27. Worse yet. Within the last three years the enrollment has increased over 50 per cent and there has been no increase in the instructional force. There was an enrollment of 200 to 300 in the Eight Weeks Winter Course and practically all the work was done by the regular Faculty members. Besides this, the Faculty members are called upon to assist with the Extension work. Facts should hurt no one. If we seem to be plain in the statement of them it is only a desire to get before the people such facts as should be known to students, taxpay-

ers, legislators, and friends of the College.

The conditions in the College have been presented repeatedly to the President and the Board of Trustees and requests made for support to meet the growing needs. This aid has not been forthcoming in sufficient amount to meet the urgent needs of the situation. It is a common comment of alumni visiting the College to say that they cannot see that the instructional force or the equipment of the College has increased since they were students, although the enrollment of students has doubled and trebled. It is a well known fact that the College has lost some valuable men recently because sufficient salaries could not be paid to keep them here. There is scarcely a person holding a position on the instructional force of the College who has not had an opportunity to go elsewhere at a larger salary within the last few years. If Ohio State is being criticised, let us first get at the facts, then try and find the solution.

Our faculty has been doing good work, as evidenced by the large number of men who have gone out and made good in all kinds of positions. The urgent need is for the Alumni to rally to the aid of their Alma Mater. Let the farmers of Ohio also come forward and say that the College of Agriculture **shall have sufficient funds** to keep pace with its enrollment—with the growth of agriculture. The state supports three universities. There are dozens of colleges in Ohio where it is possible to get an arts education, but only one where an agricultural course may be obtained. It is an injustice to advertise a college and have young men come to it and then not provide reasonably good facilities of education for them. Let our Professors receive a salary in

keeping with their ability, their positions and the high cost of living. Then if our present men are not big enough for their positions, get such as are capable of holding a professorship at Ohio's only Agricultural College.

Better more money in men and less in buildings—though suitable accommodations are essential. Better though a big man, a man of learning and inspiration than a dozen buildings or a dozen men who are unable to inspire the youth of Ohio to push forward to achievement and success. So let us be charitable in our criticism. Get at the real facts. Stand by the College. Urge the Legislature to grant sufficient funds to get more and better instructors to keep pace with the enrollments, with agriculture, and then will Ohio's Agricultural College fulfill its mission of service and usefulness to its great constituency—the people of Ohio.

The 63rd State Fair and the last under the old management has passed into history. The Fair was

THE STATE FAIR.

indeed a wonderful success. Such a gathering of superb equine beauties is seldom seen short of the really great shows. Too, the ovine and bovine departments were well represented by show ring toppers. In the swine ring also there was a wonderful show. Just to wander around over the grounds and through the capacious halls filled with all kinds of exhibits from the most practical, put on by the Experiment Station, to the art hall filled with beautiful drawings and paintings is a liberal education in itself.

The management is always after improvements and new ways of serving the public. To say that the Ohio State Fair excels most state fairs would be putting it mildly. Seldom does one see

a finer collection of educational exhibits gathered together in one exhibition. It is well that this is true. That is the real idea of a fair—education and instruction, coupled with exhibition and entertainment.

A pleasing feature was the number of young men—and most of them Ohio State men—who were prominent in the show rings. Any one pessimistic about the ability of the agricultural graduate needed only to visit the State Fair, read the names of the exhibitors and study the part that Ohio State men play in the show. Many of the new and more desirable features were due largely to Ohio State men. Take the Percheron Futurity, for instance. The investigators, promoters, exhibitors, and prize-winners were largely Ohio State men. This is as it should be. Let our college men play a real part in our agricultural affairs. Get out and take a part and Ohio's agriculture and Ohio's Fair will be bigger and better than ever.

Among all the good things on display and with all the fine imported live stock on parade, never was so much attention given to home bred stuff. May this good work go on. Let the American breeder have a fair chance. The time will soon be here, if not already, when America will produce as fine a class of live stock as any country in the world. There are some breeds already that have the finest and best individuals and herds to be found anywhere. Help the home breeder. Make the Fair a real educational institution. Enlarge it. Add an arena for night exhibitions. Look after the sanitation and provide better and more sanitary eating places. Let every loyal citizen of Ohio get behind the new Agricultural Commission and place the state, the fair, and the colleges of Ohio on the topmost rung in the Union.

That "This is the day of advertising" is a trite yet ever true statement. Never

has the science of advertising been studied as at **OHIO.** **FOREMOST.** the present time. The highest salaried men are found on the advertising staff of our great magazines, city dailies and farm papers, rather than in the editorial chair. The great business interests, the corporations, the department stores—all are spending enormous amounts in advertising—in boosting.

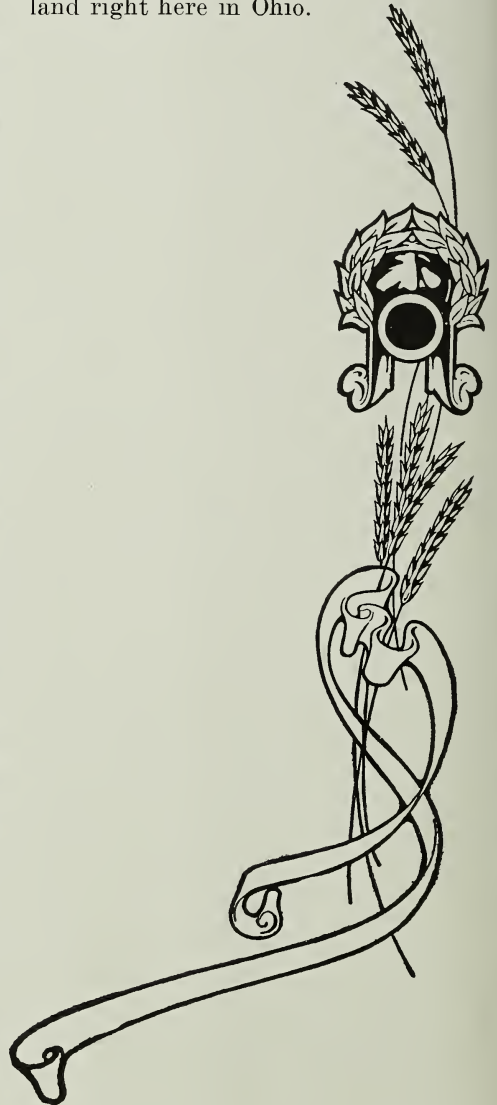
One of Ohio's wealthiest and best known business men—also a farmer and promoter—advocates a different kind of advertising, viz: the producing of superior wares, products or what not. In the production of superior products lies the real secret of success in advertising, he says. An advertising campaign, then, must be backed up by goods of quality, of merit and of superior workmanship.

Why not do a little more judicious advertising of Ohio's merits? Here, half way between the Atlantic ocean and the Mississippi river, lapped on the north by the waters of the Great Lakes and washed on the south by the Ohio river, is the noted Gateway of the Great West. Through Ohio's valleys, over her hills and across her great wide glacial plains passed the great western migration. And now great monsters of steel and iron are pulling long freight trains, filled with the products of the western plains on the way to the eastern markets. Why should such a state, situated as is Ohio, not be the greatest state in the Union?

Let us have more of the western spirit, some western methods, some western advertising and support. Nowhere will there be found a better climate, a more varied agriculture, a more progressive and intelligent people full

of greater possibilities if they are only developed. What is needed in Ohio is for her people to grasp—to get a glimpse of the real Buckeye State that is possible. And right here is where her college men, her agricultural graduates, must play their part.

Boost Ohio. Get a vision, Mr. College Man. Do some real work for your Alma Mater—for the State of Ohio. Stand on the mountains as Moses did of old and look into the real promised land right here in Ohio.





SPECIALS



Among the new men whom we welcome to the instructional force of the Agricultural College is Norman W. Scherer, of the Department of Forestry. Mr. Scherer is a native of the Buckeye State who sought higher learning in the University of Michigan. He graduated there in Forestry in 1910 and took his master's degree the following year. Since leaving College he has been an Investigator in the Forest Service with headquarters at Albuquerque, New Mexico. He has also been doing work in connection with the Fort Valley Experiment Station. Among the subjects which he will teach as Assistant Professor of Forestry will be Elementary Forestry, Protection, Mensuration, and Silviculture. Well educated and seasoned with experience, we have high hopes for the work Mr. Scherer will do among us.

James R. Wiley, a 1913 graduate from Purdue University, is the new Assistant in the Department of Animal Husbandry. Having been raised on an Indiana stock farm, it does not seem surprising that Mr. Wiley should have pursued an intensive Animal Husbandry course at College. While at Purdue he exhausted the curriculum along his pet line and, in addition spent one year in the study of Dairy Husbandry. Mr. Wiley also enlarged his experience when ever possible by gaining practical experience. One summer's vacation was spent with Dr. Geisel's Herefords and Durocs on the 1350 acre farm at Shelby, Indiana, while another vacation was spent with Swift & Co. in hog feeding experimentation. Mr. Wiley's thesis work was done under Dr. Craig on the subject of "Duration of Hog Cholera on the Lesions of the Disease." His

college connections show him to be a live wire and a good student, and it is with pleasure that we welcome him to Ohio State.

V. C. Smith, a 1912 graduate well known to the upper classmen in the Agricultural College, has returned to his Alma Mater in the capacity of Assistant to Dean H. C. Price. He will also aid Prof. H. C. Ramsower with some of his duties as Secretary. Since graduation Mr. Smith has been teaching in a High School at La Salle, Illinois, spending half of the day in instructional work and half in extension work. In connection with his teaching there he carried on an investigation of the city milk supply which was contributing to the subsistence of the 15,000 of La Salle's population. Mr. Smith's chief concern was to see modern sanitary methods of delivery adopted instead of dairymen practicing the uncleanly custom of dipping the product from large cans into receptacles which housewives would leave on the doorsteps. Some of the milk delivered in this way showed bacteria in excess of 1,000,000 per cubic centimeter. After speaking before the business men's league and various womens clubs he succeeded in revolutionizing the system, much to the gratification of the Board of Health, who elected him as an honorary member of their organization. Mr. Smith is much interested in dairying problems and spent the past summer at Ohio State doing graduate work in Dairy Bacteriology. He has an Extension Bulletin in preparation on that subject. We congratulate Mr. Smith on his good work and welcome him back to our institution.

WITH THE BREEDER

NOTES OF INTEREST AMONG THE FLOCKS AND HERDS

NEW JERSEY RECORD.

A new record of 18,782 lbs. 14 oz. milk, 962 lbs. 12 oz. fat, and 1132 lbs. 12 oz. estimated butter places Eminent's Bess, 209,118, at the head of the Jersey breed. The cow is owned by W. S. Prickett, of Sidnaw, Mich. This surpasses the record of Jacoba Irene, which cow gave 17,253 lbs. 3 oz. milk and 1126 lbs. 6 oz. butter. Eminent's Bess is now 8 years old and was scored 95% by H. College. The Roycroft Farms and the Jersey world are indeed to be congratulated upon the wonderful record of this cow.

It is interesting to note the progress in the breeding of dairy cattle in recent years. Formerly the breeder only examined the Herd Books to see if an animal was registered, and if so, he was led by the charm of "imported." The first step in advance was a demand for a greater quantity of milk, but now the breeding stock must give not only a large quantity of milk, but also a good quality of milk as shown by the per cent of butter fat. This the Babcock test has made possible and the Advanced Register is the fruit of the breeder's efforts.

The Ohio Live Stock Commission, now a part of the Agricultural Commission, has taken an important step forward in eradication of hog cholera in this state. The legislature appropriated \$20,000 for testing the treatment

in one county. Fayette was chosen because it lies in a rich region in the center of the infected districts, and because the farmers there have had experience in cholera treatment. The commission is now publishing a bulletin to distribute to each farmer of the county. Each farm will be visited by a veterinarian and a report made to determine just where the infection lies. By next spring it is hoped that the preliminaries will be finished and the work of immunizing begun.

The United States Government has undertaken the great problem of stamping out hog cholera. Congress appropriated a sum of money and placed it in the Bureau of Animal Husbandry to conduct trial campaigns against this menace of the hog industry. Four counties, one each in Iowa, Missouri, Nebraska and Indiana, were selected. Montgomery County, Indiana, expects not only to be greatly benefited herself, but also to show to the state what serum can do if properly used. If the campaign is successful and is then adopted by hog raisers in the state, the \$25,000 spent by the government for the trial will be saved within two years. This is a great step towards better agriculture and should receive the support of all the live stock breeders.

The prospects of the National Dairy Show point to another record breaker.

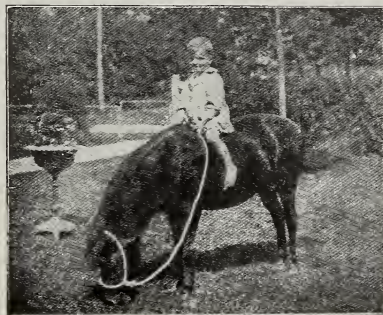
Nearly every day will be a special one, such as Jersey, Guernsey, Grange, Holstein and Milk Dealers' days. There will be about an acre of dairy and other machinery. Pasteurizing, ice cream, and bottling plants will be in operation. There will be daily addresses and demonstrations by the U. S. Department of Agriculture. The date set is Oct. 23 to Nov. 1.

Because of the presence of hog cholera in one of the herds exhibited at the Ohio State Fair, the veterinary authorities of the state quarantined all the hogs on exhibition and permitted their removal only after the danger of spreading the disease had passed. A herd from North Randall carried the infection and was admitted although the disease was made known to the superintendent. This caused great inconvenience to the exhibitors expecting to show at other fairs, but the action of the authorities seems justified.

It cost the state a considerable amount, but taught the lesson that they must refuse admittance to diseased animals.

The first of the semi-annual stock sales to be conducted by the Portage County Improvement Association was held at Ravenna in September. The bidding was spirited throughout the sale and many animals of the better type brought satisfactory prices. The horses averaged over \$149 and the cattle \$94. The first sale was a great success and the Association expects to hold them regularly. Sales like this should be held in every county in the state.

In 1907 the American Bison Society donated to the Government a herd of 15 head which has been placed in Wichita National Forest. By careful attention the Texas fever tick has been eliminated and now the herd numbers over 50 animals.



"The Boy lives on our Farm, he's not
Afeard o' horses none!"

CURRENT AGRICULTURAL LITERATURE

COMMENTS AND CRITICISMS ON
CONTEMPORARY CONTRIBUTIONS

A new book on Rural Economics, entitled "**Farm Management**," by **G. F. Warren, Ph. D.**, has just appeared. This book is based on data secured from farm practice, cost accounts, census reports, and travel and study in general over different part of the United States. It is intended to present to farmers and students, business principles and their application to rural conditions. Different types of farming receive due discussion. Furthermore, capital, labor, and marketing are all covered in detail. In short, a vast amount of knowledge is presented which every intelligent farmer should know. The Macmillan Co., 590 pages, cloth, .80 net.

There is a wonderful fund of knowledge to be found in a book written by **Charles E. Thorne**, Director of the Ohio Experiment Station, on "**Farm Manures**." Although this material may be found in the bulletins of the Department of Agriculture and of the State Stations, yet this is the first book to bring this together for ready reference. A few pages have been devoted to the origin of soils, composition of plants, and commercial fertilizers, but the main subject is green and animal manures. It is a book that every farmer should know. Orange Judd Co., 240 pages, illustrated, \$1.00 net.

The Practical Garden Book is a recent publication from the pens of **Dean L.**

H. Bailey and **C. E. Hunn** of Cornell University. The book contains the simplest directions for the growing of the most common things and for those simple garden operations which most books take for granted. The Macmillan Co., N. Y. \$.50 net.

A new book on secondary agriculture has just been brought to our attention. It is "**Sixty Lessons in Agriculture**," by **Buffum and Deaver**. It is intended for use in seventh and eighth grades. The language is simple and free from technical phrases. It treats of the physical and chemical properties of soils and methods of management. Many chapters are devoted to the different field crops, fruits, farm animals, and various other things connected with the farm. American Book Company, Cincinnati, 272 pages, illustrated, .80.

Messrs. W. B. Mercier and **H. E. Savely** have just published a book entitled "**The Knapp Method of Growing Cotton**." Both these gentlemen are Agriculturists and Field Agents of the Department of Agriculture. Their aim has been to give a concise and practical treatise on cotton growing. In fact nearly everything that relates to the production of cotton is well presented. Doubleday, Page & Co., N. Y., 208 pages, illustrated, cloth \$1 net.

We have just received a book for boys and girls. It is entitled "**The Book of Useful Plants**," by **Julia Ellen**

Rogers. It is intended to make the younger generation familiar with the more important facts regarding our economic plants. For convenience they are divided into plants entering into bread-making, forage plants, sugar plants, those grown for their edible seeds, those grown for their leaves and stems, those whose roots and tubers we eat, fruits, beverages, narcotic, and fiber plants, and those which serve special purposes. Doubleday, Page & Co., N. Y., 374 pages, illustrated, \$1.10 net.

“**Financing the Rural Church**” is an article which appeared in the **Atlantic Monthly** for September, by **Joseph Woodbury Stuart**. This article, written by a minister, gives some of the faults and shortcomings of the finances of the Rural Church. They are not characteristic of the church alone but of the community as a whole. Actual instances are cited by way of illustration. In a plan to better the situation, he suggests a new idea,—that the church must reconstruct its financial customs, basing its methods on business principles.

There is a pretty good suggestion in an article in the **Ohio Farmer** of September 15, on the filling of silos, by **Dillwyn Stratton**. He advocates the owning and operating of silo filling machinery by small rather than large

companies. He shows where the waiting on the larger companies is always expensive. This fact is well illustrated every year.

In the **Literary Digest** of September 6, an interesting article may be found on “**Farming on the Ground Floor.**” It is written in part by **X. W. Putnam**. In it are cited the results of several experiments with dynamite in loosening the subsoil for tree planting and field crops in general. Undoubtedly there are great possibilities for this new method in some regions.

Prof. W. Paddock has expressed his views regarding “**Apple Marketing**” in the **Ohio Farmer** for September 20. He has mentioned some of the peculiarities of the apple market such as a craze for a particular variety. But in particular, he points out the injurious effect of poor, inferior fruit upon the market. The former cannot be helped, but the latter can.

Mr. F. A. Welton of the Ohio Station has given a good review of wheat culture in the **American Agriculturist** for September 13, in “**Best Methods in Seeding Wheat.**” He has expressed the results of several years’ experiments in wheat growing at the station together with the conclusions to be drawn therefrom. Variety tests are also discussed.

But let the good old crop adorn
The hills our fathers trod.
Still let us for his golden corn
Send up our thanks to God.

Whittier.

ALUMNI WHAT THE BUSY GRADS ARE DOING

Many graduates, ex-students and students made it their business to visit the booth of The Agricultural Student during the State Fair and to greet their old friends and members of the staff. Nearly all registered, giving their vocation and residence. Among those registering were **Chas. Burkett**, '95, Editor of the American Agriculturist; **John F. Cunningham**, '97, '99, editor of the Ohio Farmer; **Chas. W. Snyder**, '09, assistant editor of The National Stockman and Farmer; **S. R. Guard**, '12, associate editor of the Breeders' Gazette, and **O. M. Kile**, '12, '13, agricultural editor of the Extension Department of West Virginia.

J. P. Hershberger, '12, is an instructor in the Agronomy Department. Since graduation Mr. Hershberger has been managing his father's farm near Lancaster. He will take some graduate work in connection with his instructional duties.

J. C. Brittin, '98, is connected with the Southern Nut & Fruit Company, N. Y.

Charles S. Fee, '06, is a member of Fee & Son firm, breeders of pure bred Holstein-Friesian cattle. Their farm is located at Cortland, Ohio.

E. D. Holl, '06, is manager of The Pure Milk Plant, Upper Sandusky, O.

Charles Fritz, '11, better known as "Ike" is at the Ohio Experiment Station, Wooster, Ohio.

Ralph R. Walker, '12, in a recent letter to The Agricultural Student, gave his vocation as Manager of "The Aready," Corsicana, Texas.

Paul Gerlaugh, '13, is an instructor in the Animal Husbandry Department at Pennsylvania State College of Agriculture.

E. D. Waid, '06, is manager of the Elm Tree Farm, Amherst, Mass.

W. W. Brownfield, '12, is interested in coal land operations in Uniontown, Pa.

F. A. DuBrul, '10, is with the Avery Co., Peoria, Ill. Mr. DuBurl represents Ohio territory for agricultural implements.

Schuyler M. Salisbury, '13, writes that he is enjoying his work as Instructor of Animal Husbandry and Dairying in the N. Carolina College of Agriculture at Raleigh, N. C.

R. F. Crim, '13, is located at Slayton, Minn. Mr. Crim has charge of agricultural work in Murray Co. This work consists of teaching agriculture in the high school of Slayton and expert work throughout the county.

D. E. Healy, '12, is taking graduate work at Ohio State.

W. R. Wheelock, '13, is professor of Agriculture Extension in the University of Arkansas, Fayetteville, Ark.

C. C. Engle, '12, is connected with the Department of Soils, Cornell University, Ithica, N. Y.

A. J. Spiers, '11, is teaching school in Lima, New York. During the summer Mr. Spiers was connected with the Dairy Department, doing Advanced Registry Testing.

F. A. Rouse, '12, is an instructor in Clemson College, Clemson, South Carolina.

Secondary Agriculture

Devoted to the Interests of Agricultural Education in High and Common Schools

This is the month to decorate the school-room and to make it bright and cheerful with the beautiful autumnal leaves and branches. "Jack Frost" with his wonderful paint brush has been retouching them with all the possible shades and tints of red, brown, or yellow and then has jumbled them all up together in glorious colors. October is perhaps the most beautiful time of all the year and we should enjoy it both in and out of school. Children will enjoy decorating the school-room with a few choicely colored leaves; which practice furnishes an excellent opportunity for artistic development as our greatest painters can but imitate the gorgeous colors of autumn. Nature is brought into the school-room and nature study becomes the theme of the hour. The boys and girls ask, "Why do the leaves change color in autumn? To what color and why? Why the difference in shape and arrangement of the leaves?" together with a hundred and one other questions. They learn to identify the different kind of leaves and trees, thus coming into close, personal touch with "Nature and Nature's God." Teachers, do not miss this opportunity to liven up the daily routine of school work!

After one year and a half of the law requiring agriculture to be taught in the common schools of Ohio, more than half a million boys and girls are studying that subject in the public

schools and more than 900 high schools are teaching agriculture. It is estimated that about 4000 teachers took work in agriculture in the summer schools last season.

A splendid article appears in this issue, entitled "Getting Agriculture and Home-making Into Our Systems." It deals with the rural school problem and takes up the School Agricultural Exhibit as one of the means of successful agricultural teaching. Mr. J. R. Clarke, the author, is State Supervisor of Agricultural Education of the Southeastern District and a man eminently qualified to write on this subject. He is a man with a message—a prophet of a new era for the farm. We wish everyone could get the message he has given us.

Every high school with a thorough course in agriculture should have its plot of ground for experimental work. The teacher in charge should be an agricultural college graduate who is able to teach the pupils in the science of agriculture, and then is able to go out among the farmers of that community, giving them practical ideas on farm crop improvement. The high school plot should be the township or county experiment station—the "Mecca" for all scientific farmers. Secondary Agriculture of this kind is capable of tremendous usefulness. This is the ideal toward which we are working and which is bound to come.

Getting Agriculture and Home-making Into Our Systems.

Unscientific farming and contempt for farming are abroad in our land—in our state: an absorption of enough units of anti-toxines to counteract these toxines is essential for the farmer and for the teacher. The chief ingredients of these anti-toxines are scientific farming, optimism and enthusiasm mixed and applied by the steady hand of the sympathetic thinker.

Our three systems—the personal system of each of us, our home system and our school system. Elementary and High—must be examined and each case diagnosed; when this is done properly, each will receive its due portions of the injections of the above ingredients.

These prescriptions must appeal to and quicken every sense—personal and public. In times past farming has been one continued development of the muscular sense—hence the dormant state of our science, our optimistic hopes and our enthusiasm, which must be aroused to carry us over the failures of depleted soils, abused orchards, the half producing gardens, and the depopulated country homes and schools.

To open the eyes and enable the vision to arouse a new soul in some teachers, pupils or patrons to the proper appreciation of the greatest product of the earth—the creations on the farm—is the purpose of these lines. The County and State Fairs come to help us in this and bid us take our lights from under the bushel. They have and do invite us to bring our eyes to the Fair and thru them absorb our needed portion of these anti-toxines that will prevent weeds, pessimism, and unpainted houses, and barren orchards, and country schools that have reached the dead line. What these Fairs present

do make the eye sparkle and warm the heart.

And the Agricultural College and Experiment Stations always have a rainbow of promise and inspiration to any eye, no matter how far it may have to come to get the view. Have you ever taken a class or school to either place? If you did, they went home with a new set of eyes and they were not glass eyes either. Great recitation in Agriculture! Let these two institutions keep on reinforcing the joy to the eye, with their oral lessons to the ear, in the details of science and the laws of Nature and how the violation of any of these brings its sure penalty from which there is no escape. To know this is honorable, sacred knowledge; when known and felt of men, then will their hands be willing and their feet will have the wings of Mercury.

The school exhibit is not a show; it is a recitation for old and young and at the same time it is entertaining; it is a demonstration of some things done and an inspiration to do again and do better. Recitation and experience after experience on the farm, in fields, woods, barns, and homes are necessary to make this exhibit educative to all and the same is true of the Fair exhibit, and the best from every school exhibit should make up the exhibit at the County and State Fairs. When County Fair Boards get as clear a vision as the State Board on School Exhibits and when schools and school boards and school teachers are fully inoculated with the anti-toxine, then will the school exhibit be the greatest text-book in "print" for teaching the heart thru the eye.

When and how shall these school exhibits be?

They may be made up of the roots



Part of a school exhibit held at Wooster High School in October, 1912. The upper part of the picture shows the grain exhibit, while just below is the bulletin file. At the left in the cabinet are samples of various commercial food products collected by the students, and specimens of plants attacked by different diseases, preserved in alcohol. This picture shows only the part of the exhibit held in the agricultural laboratory. The whole exhibit included five rooms. Prizes to the amount of fifty dollars were distributed.

stems, leaves, fruits and seeds of the weeds, flowers, grains, vegetables, orchards and forest trees, tuber, vines, shrubs, and berries and grasses.

A miniature hot-bed in detail, or flower garden may be shown.

Plant diseases and insect enemies of home, field and garden may be collected and displayed. Methods of prevention or destruction of these will appeal to any eye.

All the different soils; soils with the different plant foods with plants growing in them will lodge fine information in the mind thru the eye.

The farm animals and the animal products are a whole year's subject of study. What an exhibit can be had from these! What an education from the exhibit!

Photographs, drawings, designs, plans of farms, homes, gardens, school grounds, lawns, barns and out buildings; pictures, books, papers and magazines, art collections, family and historical relics and collections all make for an inquiring eye and a receptive head.

No school or fair exhibit is a fair that does not show a due proportion of the hand work of all the children. Manual training work in wood, sewing, embroidery, painting, drawings, writings, baking, butter making, canned goods, and garden and flower growing—all make for the natural training and education of the natural talents and tendencies of these boys and girls. The work of **all** the children should be shown for a school exhibit of just a few of the so called best pupils is a failure and ought to be so. So let us show what the young people can do. Old people like to show off, and every time they show something good they are better for it. Why not the same of young people? It does them all good.

Now crown the School Exhibit with

something from the science and perfection of the Experiment Station, the Agricultural and Domestic Science Colleges. With these exhibits have some of the good men and women from these institutions bring a message to the ear that shall enhance and glorify the lessons to the eye. Get the help of your Supervisor of Agricultural Education to assist the teachers and boards of education to outline the work of the months and years.

No School Exhibit is complete until it bears from the lips of the pupils an oral description of what the eye has seen; until the exhibit is transposed into a contest and the exhibit judged by a wholly competent, disinterested person; until every pupil in the school exhibits; until the oral and written work is a matter of pride as to farm and home subjects; until a Club or Literary Society is organized and manages the whole affair; until it is shown under the best conditions as to light, sentiment, and comfort; until local merchants, the Grange, Farmers' Institute, newspapers, patrons, and the women are a part of it in some way—furnishing premiums, helping with contributions without wanting to be the whole show or crowding out the originality and efforts of the children; until the boys and girls can smile in defeat and try again just to learn; until the best is taken from the regular exhibits and preserved for the exhibits at the State and County Fairs. The exhibit is no idle show; it is a whole school, Agricultural College and Experiment Station in one volume of one page, bound in the impulse of heart beats of boys and girls. Hang this sign up over every school exhibit: "What have you learned?" A goodly injection of the anti-toxine is now at work; it enters the eye and ear and inspires the heart and to

this the hand responds willingly. We now know that the Agriculture and Home-making has gotten into our systems, for when we look and SEE, then we feel the invigoration and we have a new beauty, a new knowledge and a new hope.

Any good school exhibit however small in Agriculture and Home-making is more healing than the fabled Nectar of the Fountain of Youth. It is the greatest show on earth and has neither the pink lemonade nor the sharper's tricks to catch a rube. It will cure the blues, heartlessness and stinginess; it will cure dead apple trees, 25 bu-to-the-acre corn and lousy cattle; it will cure unhappy teachers and truants and will resurrect a dead board of education; it will cure poor farmers and disgruntled house wives and poor bank accounts.

It will raise any teacher in the estimation of his or her patrons and will raise his or her salary—in that district or some other one. It will create a taste for Heaven and will rule the other place out of so much to say in school and farm affairs. Get an injection of this anti-toxine in your school NOW. Take about one injection each month of school.

The student of the Agricultural College can administer this serum. He can carry the standards back home to his old school that his new school—the College—has given him. Judging exhibits, helping to collect and arrange such at his school, at the Farmers' Institutes, and Fairs will be places of pride to him, and his bread thus cast upon the waters will return to him buttered on both sides in days when he may least expect it and most appreciate it.

Boys, get busy. Leave your college airs behind you and go back to the old

school and old friends with a new and happier knowledge of some things you have made your own at college. Retouch your old friendships with a kindly visit and a show of a new pride in the best and not least of vocations. Take something back with you, some thing that can be seen and felt and loved.

J. R. CLARKE,
State Supervisor of Agricultural Education,
Southeastern District, 373
Wilbur Ave., Columbus, O.

The farmers of Western Michigan have organized and are attending night schools of scientific Agriculture. This type of Secondary Agriculture is proving itself very popular and helpful.

We extend an invitation to our readers to use these columns. If you are doing anything notable in agricultural teaching let us hear of it. We would like to get in touch with the teachers—especially our own Alumni—who are doing work in Secondary Agriculture.

The United States Bureau of Education has recently published a Bulletin on, "Agricultural Instruction in Secondary Schools." Any one interested can secure the Bulletin by writing to the Bureau of Education at Washington. With regard to the future work in teaching agriculture, L. H. Russel of the University of Wisconsin says: "No field in agricultural development is going to offer a wider opportunity than that which just now obtains with reference to the training of teachers, and it is highly desirable that students entering this avenue of activity should consciously prepare for this work as far as possible. To do this, a student should secure a broad foundation rather than specialize in any one phase of agricultural development."



Athletics at Ohio State



This fall marks the completion of the biggest step Ohio State has ever taken in Athletics, her entrance into the Western Conference. Last year we competed with the Western Colleges in Basketball, baseball and track. This year Ohio State makes her initial appearance in Western Conference football circles. The prospects for a strong team are unusually bright. A squad of 75 men is working out every night under Coach Wilce and Athletic Director St. John, and is being thoroughly trained for the hard games which are to follow. As usual a large number of Agricultural students are on the squad. Of these Captain Geissman and Keifer, veterans from last year are sure of the tackle positions. From the strong Freshman team of last year Shaad, McClure, Knoll and Canaga are deserving of mention.

The schedule for 1913 is as follows:

- October 4—Ohio Wesleyan.
- October 11—Western Reserve.
- October 18—Oberlin at Oberlin.
- October 25—Open.
- November 1—Indiana.
- November 8—Wisconsin at Madison.
- November 15—Case.
- November 22—Northwestern.

Cross-country track men are working hard under Coach Castleman for the big Western Conference Meet, which will be held here November 22, just before the Northwestern game. A number of men from the Agricultural College are out for track and several will be on the team. Among these are three old men—Dawson, Barnhart and Robertson.

Mr. William Hislop of the Animal Husbandry Department, is devoting several hours each week to the development of a Soccer football team. This is a new game at Ohio State and one worthy of more attention. Mr. Hislop is a graduate of the University of Edinburgh where he played for a number of years.

We believe that the students and alumni of the College of Agriculture are as much interested in athletics as are the men from the other colleges of the University. The "Ags" have always done their full share toward upholding the honor of the "Scarlet and Grey."

Several other collegiate and inter-collegiate meets will be scheduled for the fall.

Doc Welsh as usual will have charge of the Freshman squad. About 65 men reported to him for first practice.

The autumn time is with us! Its approach
Was heralded, not many days ago,
By hazy skies that veiled the brazen sun,
And sea-like murmurs from the rustling corn,
And low-voiced brooks that wandered drowsily
By purpling clusters of the grape juice,
Swinging upon the vine.



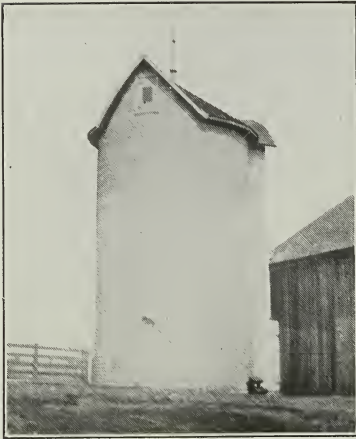
October News Notes

From the preparations that are being made for Farmers' Week, February 2 to 6, 1914, it will undoubtedly be the biggest event of this kind ever held at the College of Agriculture. Every effort is to be made by those in charge to give the farmers of the state the best instruction that the facilities of the college will afford. In addition to the lectures by prominent agriculturists from Ohio and other states, several meetings and exhibitions of interest will be in progress during the week. This list will include meetings of the Ohio State Dairyman's Association, Ohio Plant Breeders and possibly the Ohio State Live Stock Association and the students' annual corn and apple shows. Another new feature to be added this year for the first time, will be Home-coming week for all former students and faculty.

Fifteen Farmers' Fall Festivals will be held in southern Ohio during October and November. The festivals will last two days at each town, during which time instructors will lecture on various phases of fruit growing and stock raising and the agricultural exhibit from the college will be shown.

A national and state organization with local chapters at colleges, normal schools, and in country communities is

being organized for the purpose of studying rural problems and of inspiring men and women of all classes, especially college graduates, to invest their talents in the country-life forward movement. This organization is called the "Collegiate Country Club of America." It had its origin in a Y. M. C. A. class at the University of Illinois led by Prof. A. W. Nolan on the subject of "Rural Problems." The organization work was started in February of last year. The national officers are, President, K. L. Butterfield, President of the Massachusetts Agricultural College at Amherst; First Vice President, R. J. Crosby, former specialist in agricultural education in the U. S. Department of Agriculture; Secretary, A. W. Nolan, Assistant Professor of Agricultural Extension at the University of Illinois. Local chapters are governed by the national constitution, but they make their own rules and provide for their own expenses. G. A. Bricker, Assistant Professor of Agricultural Education, and Managing Editor of the "Rural Educator" at Columbus, Ohio, is promoting this organization at Ohio State. Prof. Bricker hopes that a local chapter may be formed here and expects to call a meeting of the agricultural students at Ohio Union the evening of October sixteenth with this purpose in view.



DAIRY DEPARTMENT.

W. G. Smith, A. L. Shelbauch, E. A. Baumiller and L. H. Burgwald have been appointed student assistants in the dairy department for the coming year.

J. W. Rising, of Fayette, is the owner of a Holstein which promises to become famous in a short time. Lindewood is the name of the animal and she has produced 30 lbs. of fat in seven days. The tester writes that she has not reached her limit yet. It is to be hoped that she will continue her good work and that Ohio will have another champion cow in the dairy world.

The National Dairy Show will be held at Chicago from October 23 to November 1 inclusive.

Prof. Oscar Erf spent his vacation up the lakes and since his return has suffered from the hay fever.

Frank L. Bowser, C. J. Windau, R. C. Goldbach, L. H. Burgwald, C. J. Fawcett, G. Harpster, W. G. Mechstroth and C. C. Coontz were in the employ of the Dairy Department this summer.

Student News.

With the election of officers for Towushend Literary Society, the fall campaign was formally opened. Following are the officers that were elected for the present semester: W. G. Smith, President; R. L. Fleming, Vice President; L. L. Rummell, Secretary; W. I. McCain, Treasurer; R. R. Buchanan, Censor; V. B. Dietrich, Assistant Censor; Karl Hirn, Director of Music; R. F. Donnon, Critic; J. F. Walker, Sergeant at Arms; T. L. Smith and R. Q. Smith, Executive Board.

H. F. Cotterman has accepted the appointment as head of the new department of agriculture in the Ohio Northern University at Ada. Mr. Cotterman ranks as Senior in the Agriculture College and will perhaps return to Ohio State in a few years and complete his work for his degree.

Charles McIntire, of Troy, O., is the new chief agriculturist for this state. He was appointed the first of last month and assumed his official duties on the fifteenth. His work includes the complete control of all farming at the State Institutions.

E. P. Reed, A. O. Hayes and S. W. Adams worked on the University Farms during the summer months.

Prof. Wm. Hislop addressed the Saddle and Sirloln Club at its first meeting of the year on "Around the Show Circuit of Great Britain." His lecture was very interesting and he discussed the differences between the American shows and those held in Great Britain. Following the talk, the election of officers was held, which resulted in the following men being elected: President, G.

D. Norton; Vice President, Rae P. Dowler; Secretary, D. W. Williams; Treasurer, C. J. Windau.



Forestry and Horticulture.

Practically two-thirds of the apples exhibited by the Ohio Experiment Station at the State Fair were last year's apples. The fruit was picked, wrapped and packed last fall and immediately placed in the cold storage plant at a temperature of 32 degrees. The apples were in fine condition when taken out and fully demonstrated the advantage of the proper cold storage of apples.

S. D. Tyler, of Huron, O., who would have been a junior in Forestry this year met with a fatal accident while working on Lake Superior this summer. He fell through the hatch of the boat on which he was employed and injured his back so that death followed in a few days. We note with regret the loss of an acquaintance and fellow student

During the first semester the Department of Forestry will offer two new courses. The first of these is entitled "History and Relations" and the second is entitled "Protection." The subjects, "Economics and Policies," which have been taught as one course, will also be offered in this department during the second semester. These are

"Forest Craft" and "Wood Technology and Products." Seminar courses are also being offered for the first time. This will give opportunity for more research work than students have previously been doing.

C. H. Goetz, formerly instructor in the Forestry Department, has accepted a position as Assistant Professor in the Colorado School of Forestry at Fort Collins. He has already entered upon his new duties.



Animal Husbandry.

The Animal Husbandry Department has purchased three very good steers for class room work.

Much interest was manifested in the Delaware County Livestock Judging Contest held at Powell, September 19th. Twenty-five contestants entered and made placings on rings of Holstein cattle, Shropshire sheep and Yorkshire hogs. The winners were five Ohio State students and carried away the first five prizes.

First, Fred Perry.....	Score 288
Second, R. F. Donnan....	" 280
Third, Rossford Jones....	" 277
Fourth, A. J. Bishop....	" 268
Fifth, W. F. Jackson....	" 256

The prizes were a Scholarship in the Agriculture College at Ohio State, a registered Jersey bull calf, a registered

Yorkshire pig, and cash prizes of three and two dollars.

Two records of note were broken at the recent Grand Circuit meeting in Columbus. Braden Direct, five-year-pacer, lowered his own record of 2:02 $\frac{1}{4}$ to 2:01 $\frac{1}{2}$. It is interesting to note that last year at the Grand Circuit in Columbus, Braden Direct made his record of 2:02 $\frac{1}{4}$ when he took the record from On Time, who had held the four-year-old record since 1894. Peter Volo driven by Murphy established a new two-year-old record of 2:06 $\frac{1}{4}$. This is a remarkable performance for a two-year-old.

A pheasant house has been constructed on the Poultry plant in which an experiment will be conducted in an effort to obtain a supply of pheasant eggs that will hatch.

R. Q. Smith judged the horses at his local fair in Clark county.

On September 29, the Highland Park farms located at Garrettsville held a very successful sale of their Guernsey cattle. Mr. G. W. Love who is the manager of the farm claimed that it was one of the most successful that he had ever held.

The fifth annual Ohio State Apple Show will be held on January 20-23 in Cleveland. This will be one of the greatest shows ever held under the auspices of the Ohio State Horticultural Society. Prominent and noted speakers from all parts of the country will deliver addresses at this meeting.

The Ohio State Corn Show will be held in Mansfield in January under the auspices of the Ohio Corn Improvement Association. An excellent show is promised for this year and it is hoped to eclipse those held in previous years. Cash prizes amounting to \$1,200 will be given away this year.

Prof. F. S. Jacoby of the poultry department has returned from Missouri where he spent the summer in giving instructions in handling eggs. Traveling over six different railroads he gave demonstrations before farmers, produce merchants and storekeepers along the way.

"Liming the Soil" is a recent extension bulletin from the pen of M. A. Bachtell. It is a discussion of the types of soil that need lime and the methods which are used in economically liming the soil.

When a bit of sunshine hits ye,
After passin' of a cloud,
When a fit of laughter gets ye,
An' yer spine is feeling proud;
Don't fergit ter up an' fling it
At a soul that's feeling blue,
For the minit that ye sling it
It's a boomerang to you.

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Rural Education, one year.....	Price, \$1.00
Agricultural Student, one year.....	Price, \$1.00
	\$2.00
Combination Price	\$1.40

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	\$2.75
Combination Price	\$1.75

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Agricultural Student, one year.....	Price, \$1.00
	\$2.00
Combination Price	\$1.60

The Agricultural Student Publishing Co.
 Columbus, Ohio.

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Our Collegiate Advertisers

Fellow Students, let us show our appreciation not only by giving these firms our trade, but by boosting them to our friends. A thousand students here in school ought to be a class that any firm would be glad to get their goods before. Look over this list of advertisers and do your business with them, at the same time mentioning your connection with "THE STUDENT."



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SEASON 1913-1914.

To those who neglected to learn to dance

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647 Neil Ave. Phones: Auto 4431; Main 6189.

Will organize a beginners' class Tuesday evening, October 21st, 7:30 o'clock. First lesson.

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199½ S. High St. Phones: Auto 3456; Main 5877.

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OAK STREET ACADEMY,

827 Oak St. Phone: Auto 7105.

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The Boston taught by private instruction.

Private lessons can be had afternoons or evenings.

Tuition can be paid \$1.00 per week until paid.

The Waltz, Two-Step, Three-Step, Columbus Minuet and Rye-Waltz taught in one term.

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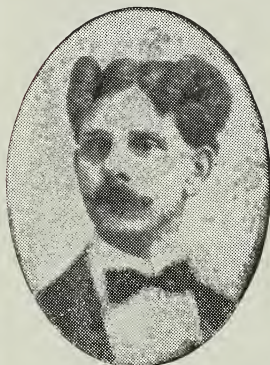
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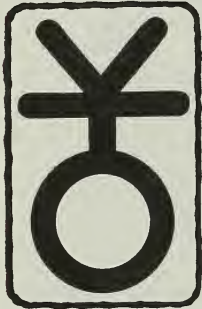
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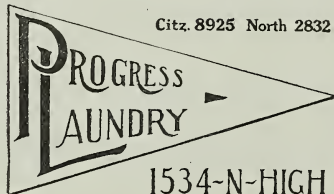
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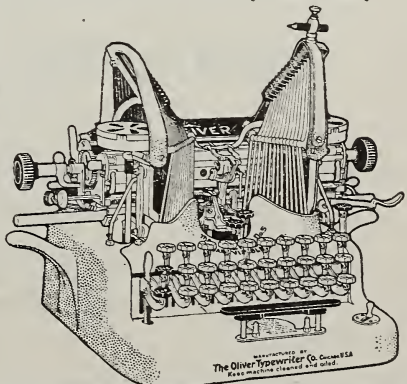
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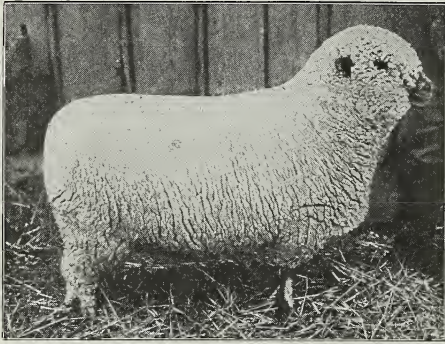
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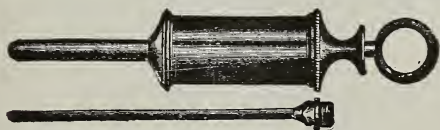


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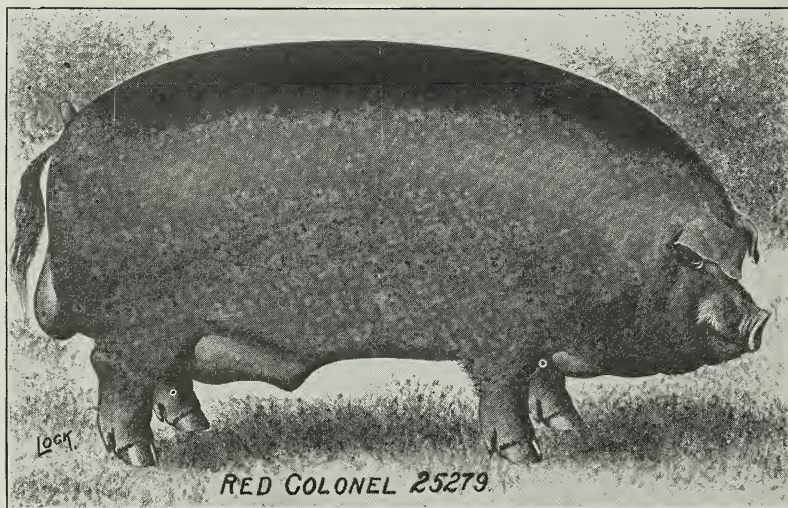
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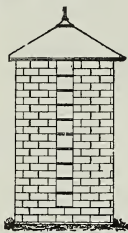
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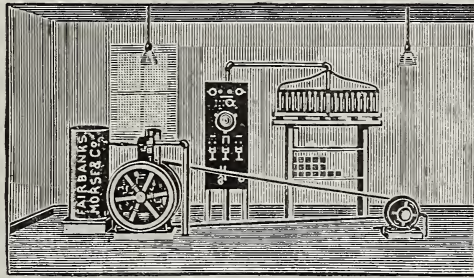
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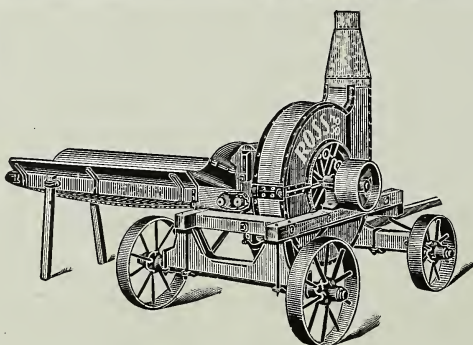
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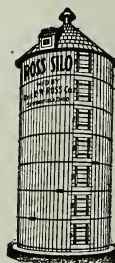
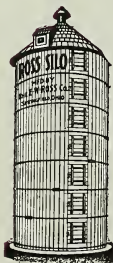
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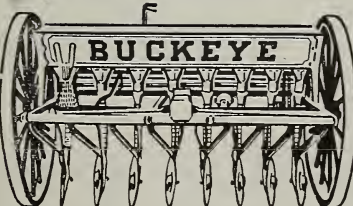
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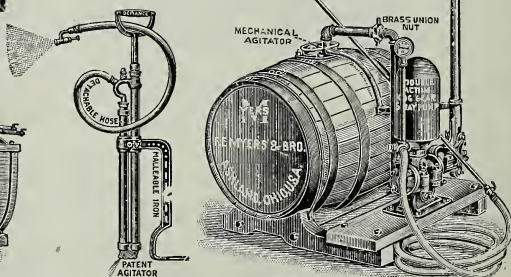
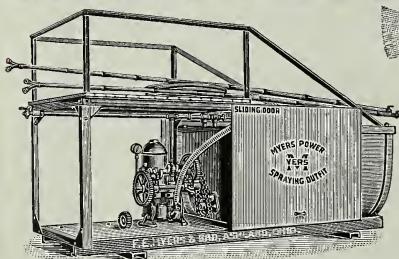
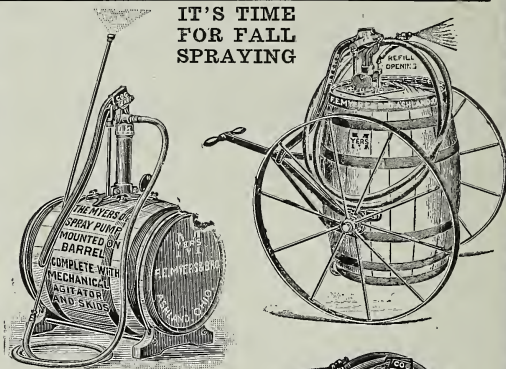
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Our Catalog No. SP13 shows all styles of **Myers Spray Pumps** for every spraying requirement, and also contains valuable spraying information. Ask for a copy—mailed to interested parties. Write Department S.

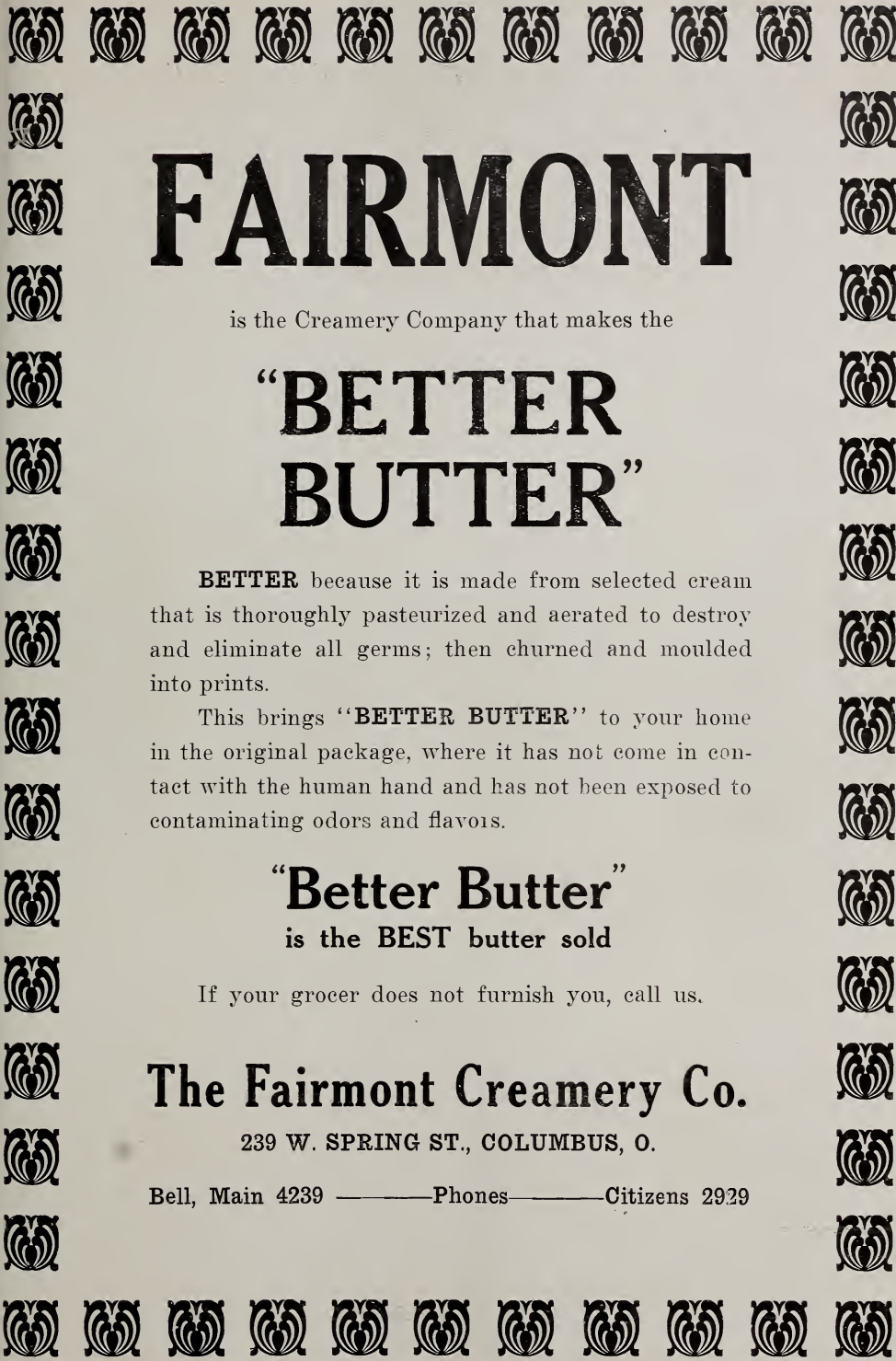
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FOR FALL
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